Refugee Migration to Germany Revisited: Some Lessons on the Integration of Asylum Seekers

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Abstract

Germany has emerged as the main destination of refugees in the EU and among other high-income countries in absolute terms at 1.6 million asylum applications, which have been submitted there from 2015 to 2018. More than two-thirds of the refugee population in Germany has received already a protection status, another one-fifth of the applications are still pending. Origin country characteristics and self-reported migration motives suggest that an overwhelming majority of this population has been affected by war, armed conflicts, persecution and other human rights violations. Micro-data from the IAB-BAMF-SOEP Survey of Refugees and from origin countries indicate that the refugee population in Germany is positively self-selected in terms of skills and personal characteristics which may facilitate labor market integration. Nevertheless, a substantial skill gap relative to the German population, particularly in the area of vocational training, forms a severe impediment to labor market integration. By the end of 2018, more than one-third of the refugee population has been integrated into employment (including marginal employment). This is slightly faster than in previous refugee migration episodes. In-depth analyses in this report suggest that (i) faster asylum procedures and the approval of a protection status increase employment chances and participation in language programs substantially, (ii) administrative dispersal policies hinder transitions into first employment particularly for those captured in regions with poor labor market prospects and (iii) access to the health system via electronic health cards can reduce emotional distress and the risk of post-traumatic diseases, which is particularly relevant for humanitarian migrants.

Keywords

Refugees, migration, self-sorting, labor markets, asylum procedures, language, dispersal policies, health policies.
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“Deutschland ist ein starkes Land. Das Motiv, mit dem wir an diese Dinge herangehen, muss sein: Wir haben so vieles geschafft – wir schaffen das! Wir schaffen das, und dort, wo uns etwas im Wege steht, muss es überwunden werden, muss daran gearbeitet werden.”

“Germany is a strong country. The motive how we approach these things has to be: we have achieved so much in the past, we will make it! We will make it, and where we face obstacles, we have to overcome them, we have to work on it.”

Chancellor Angela Merkel, August 31, 2015

1 Introduction

The above quote, from the summer press conference of Angela Merkel in the year 2015, has become the controversial leitmotif of her refugee policies which have changed the political landscape in Germany, if not in Europe, until today. Refugee migration has become a major issue not only in Germany but in almost all European countries since war, persecution and other forms of violent conflicts have unfolded in the Middle East following the events of the Arab Spring in late 2010. According to the UN High Commissioner of Refugees, the total population of concern has achieved a new high at 71.4 million persons by the end of 2017, up from 33.9 million by the end of 2010 (UNHCR, 2018, 2019). This figure includes 40.5 million internally displaced persons and 5.4 million Palestine refugees,1 leaving some 23 million refugees and asylum-seekers living abroad (UNHCR, 2018). The overwhelming share of the population of concern resides in developing countries (85 percent), and one-third in least developed countries, most of those in conflict areas. The high-income countries of the OECD2 hosted 5.1 million refugees and asylum-seekers by the end of 2017 and the EU-28 3.7 million (Figure 1-1).

Germany has evolved as the main destination among the high-income countries of the OECD in absolute terms: 1.6 million first-time asylum applications have been submitted there in the years 2015 to 2018, which corresponds to 41 percent of the 3.9 million first-time asylum

1 Palestine refugee is any person whose or whose fathers’ “normal place of residence was Palestine during the period 1 June 1946 to 15 May 1948 and who lost both home and means of livelihood as a result of the 1948 conflict” (UNRWA, 2019). Palestine refugees fall under the United Nations Relief and Works Agency for Palestine Refugees (UNRWA) mandate.

2 The EU-28, Australia, Canada, Iceland, Japan, New Zealand, Norway, South Korea, Switzerland, USA.
applications in the EU-28 during the same time span (Eurostat, 2019). The total stock of the population which has arrived in Germany as asylum-seekers\(^3\) climbed to 1.6 million by the end of 2018 (Central Register of Foreigners, AZR, 2019). As depicted in Figure 1-2, Germany achieved a share of about two-fifth of the population of concern in the EU-28 and 27 percent of the respective population in high-income countries by the end of 2017.

**Figure 1-1:** Evolution of the Population of Concern, 1951 – 2017, persons

![Evolution of the Population of Concern, 1951 – 2017, persons](image)

*Source: UNHCR (2019); authors’ calculations.*

The German case is, thus, of major interest for understanding the economic and social consequences of refugee migration from a developed country perspective. About four years after the famous press conference of Angela Merkel, this study recapitulates refugee migration to Germany and investigates in some detail what has been achieved so far and what not. It focuses mainly on the integration of refugees into the German economy and labor market, addressing numerous controversial policy issues. There are many aspects which distinguish refugee migration from other forms of migration. First of all, migration motives and determinants of refugees may differ from those of other migrants. War, persecution and other forms of violence may dominate economic and social motives for migration, which in turn

\(^3\) This covers individuals who are still in the asylum procedure, who have received a protection status and those whose asylum applications have been declined but still reside in Germany. Throughout this paper, the term “refugee” refers to all of these groups if not otherwise stated.
implies that refugees are much less prepared to economic and social integration. Moreover, moving costs and risks are much higher for refugees and asylum-seekers in comparison to other types of migration.

**Figure 1-2:** Evolution of the Population of Concern in High Income Countries, the EU-28 and Germany, 1951 – 2017, persons

Second, as a consequence, refugees might be selected in specific ways from the home population both in terms of structural aspects such as demographic characteristics, education and economic resources as well as with respect to behavioral characteristics and attitudes. Both may impact the subsequent integration (not only) into economies and labor markets.

Third, the institutional conditions differ compared to those of other migrants: refugees are obliged to prove their claims for asylum and are subject to higher uncertainty regarding their legal status and prospects to stay, which, in turn, has substantial implications on, e. g., human capital investment. Moreover, refugees face further institutional restrictions such as residence obligations and employment bans hampering mobility and reducing integration chances.

Finally, experiences of war, persecution and the risks of the refugee migration create a specific burden for the refugee population compared to other migrants, particularly for mental and physical health. The refugees’ access to the health system remains, however, restricted in many OECD countries. It is, therefore, important to understand the implications of different health

*Source: UNHCR (2019); authors’ calculations.*
policies for the well-being of refugees in destination countries.\textsuperscript{4} We focus here, therefore, on the aspects outlined above, since they are in our view key for both understanding the refugee integration process in developed countries and the implications of the related policies.

For our empirical analyses, we draw – beyond some macro data – on a unique database, the IAB-BAMF-SOEP Survey of Refugees,\textsuperscript{5} which is a longitudinal household survey of refugees who arrived as asylum-seekers in Germany. It is conducted by the Institute for Employment Research (IAB), the Research Center of the Federal Office of Migrants and Refugees (BAMF-FZ) and the Socio-economic Panel (SOEP) at the German Institute for Economic Research (DIW Berlin).

The sampling frame of the survey has been drawn from the Central Register of Foreigners (Ausländerzentralregister, AZR) in Germany, where each foreign citizen is obliged to register by her or his legal status. The target population of the first wave of the survey were asylum-seekers who arrived between January 1, 2013, and January 31, 2016 in Germany and have been registered at June 30, 2016 by the AZR at the latest. Importantly, the survey covers these individuals irrespective of their current legal status, i.e. it includes asylum applicants, who are still in the asylum procedure, individuals who have received a protection status (political asylum according to Art. 16a of the German constitution, refugees according to the Geneva convention, subsidiary protection etc.), and individuals whose asylum applications have been declined. An additional survey covers also asylum-seekers who arrived until and December 31, 2016 and have been registered by January 1, 2017. The total sample covers roughly adult persons (18 years and older), which have been surveyed at least once, 35 percent of them participated in both waves (repeated respondents). The sampling frame and survey design allows to draw representative evidence for the refugee population and their household members who arrived from January 1, 2013 to December 31, 2016, in Germany, i.e. it covers the refugee migration surge in 2015 and the beginning of 2016.

\textsuperscript{4} Needless to say, this is only a selection of topics relevant for the economic and social integration of the refugee population. Housing, access to childcare, school and other forms of education are among other issues relevant as well.

\textsuperscript{5} This study uses the factually anonymous data of the IAB-BAMF-SOEP Survey of Refugees, wave 1-2. Data access was provided via a Scientific Use File supplied by the Research Data Centre (FDZ) of the German Federal Employment Agency (BA) at the Institute for Employment Research (IAB). DOI: 10.5684/soep.iab-bamf-soep-mig.2017. For data documentation, see Brücker et al. (2017).
The total sample covers 7,430 adult persons (18 years and older), who have been surveyed at least once. The questionnaire comprises about 450 questions addressing an individual’s migration, employment and education history, educational degrees, health status, behavioral characteristics, values and attitudes, registration and asylum procedure, language and integration measures participation and labor market integration. The household questionnaire of the survey addresses housing, infrastructure, welfare benefits and similar issues relevant for the entire household. The household questionnaire of the survey addresses housing, infrastructure, welfare benefits and similar issues relevant for the entire household. Using appropriate weights, we are able to draw representative inference on the refugee population and their household members in Germany who arrived between January 1, 2013 and December 31, 2016. For further information see Brücker et al. (2016, 2019) and Brücker et al. (2017).

The remainder of this study is organized as follows: In chapter 2, we present stylized facts on the causes, costs and risks of refugee migration. The chapter also provides some descriptive insights which contribute to our understanding of the 2015 refugee migration surge in Germany and its subsequent decline. Building on this, we secondly describe the self-selection and the structure of the refugee population in terms of demographic and gender composition, education, behavioral characteristics, values, religious beliefs and attitudes. In chapter 3, we analyze the evolution of labor market integration of refugees in Germany and their participation in integration and language programs to establish the main facts for an in-depth analysis of factors driving the integration in the subsequent chapters. In chapter 4, we use individual data on the length and outcome of asylum procedures to investigate the effects on asylum-seekers’ labor market integration and their German language investments. Chapter 5 analyzes the implications of spatial dispersal policies and mobility restrictions, which vary in Germany across regions and time; this, in turn, allows identifying the causal effects of those policies. Chapter 6 investigates the consequences of policies regarding the access to health care on the health status of the refugee population. The final section concludes.
2 The causes and costs of refugee migration

Refugee migration differs from other forms of migration in many respects. War, persecution and forced displacements affect the motives and causes of migration, although economic, social and other factors may influence refugee migration as well. Moreover, given that legal channels for the immigration of asylum-seekers are largely restricted if they exist at all, the costs and risks of refugee migration are substantially higher in comparison to other forms of migration. These costs and risks however have a high variance across regions, time and individuals since legal impediments and policies combatting irregular migration change, with substantial consequences for refugee migration routes, modes of transport, the utilization of smugglers etc.

The main purpose of this chapter is to analyze the migration causes and motives as well as the costs and risks of refugee migration to Germany. This contributes in our view to an understanding of the self-selection process of refugees, which is discussed in the subsequent chapter, and their integration prospects. The immigration policies of Chancellor Merkel and the German government still dominates the public debate on European asylum policies. It is a popular view that Chancellor Merkel’s policies have triggered the 2015 immigration surge. Although it is beyond the scope of this chapter to analyze this hypothesis to its full extend, we also explore whether the available information on the evolution of refugee migration to Germany supports this view or whether the prevalence of other factors such as reduced migration costs and risks might explain the immigration surge in 2015.

2.1 The causes and motives of refugee migration

Two-thirds of the refugee population in Germany originate from five countries: Syria, Afghanistan, Iraq, Eritrea and Iran. The remainder stems largely from crisis countries at the Horn of Africa and some Asian countries. Relatively safe regions such as the Western Balkan countries (6 percent) and the Northern African countries (1 percent) have only a negligible impact on the composition of the refugee population in Germany. The same holds true for most Sub-Saharan countries.

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6 The term ‘refugee population’ is defined here as individuals who have submitted an asylum application and are still in the asylum procedure, individuals who have received a protection status according to Article 16a of the German constitution (political asylum), as refugees according to the Geneva Convention, subsidiary protection and replacement protection (Abschiebeschutz), as well as tolerated individuals whose asylum claims have been declined (Geduldete), as well as those who have to leave Germany on short notice (vollziehbar ausreisepflichtig).
Table 2-1: Political terror, political rights- and civil liberties violations and battle-related fatalities in origin countries of the German refugee population

<table>
<thead>
<tr>
<th>Origin country characteristics</th>
<th>share in % of refugee population</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Political Terror Scale</strong> 1)</td>
<td></td>
</tr>
<tr>
<td>Level 1</td>
<td>3</td>
</tr>
<tr>
<td>Level 2</td>
<td>7</td>
</tr>
<tr>
<td>Level 3</td>
<td>10</td>
</tr>
<tr>
<td>Level 4</td>
<td>20</td>
</tr>
<tr>
<td>Level 5</td>
<td>60</td>
</tr>
<tr>
<td><strong>Freedom House Political Rights Index</strong> 2)</td>
<td></td>
</tr>
<tr>
<td>Rating 1</td>
<td>1</td>
</tr>
<tr>
<td>Rating 2</td>
<td>1</td>
</tr>
<tr>
<td>Rating 3</td>
<td>9</td>
</tr>
<tr>
<td>Rating 4</td>
<td>5</td>
</tr>
<tr>
<td>Rating 5</td>
<td>29</td>
</tr>
<tr>
<td>Rating 6</td>
<td>6</td>
</tr>
<tr>
<td>Rating 7</td>
<td>50</td>
</tr>
<tr>
<td><strong>Freedom House Civil Liberties Index</strong> 3)</td>
<td></td>
</tr>
<tr>
<td>Rating 1</td>
<td>0</td>
</tr>
<tr>
<td>Rating 2</td>
<td>3</td>
</tr>
<tr>
<td>Rating 3</td>
<td>4</td>
</tr>
<tr>
<td>Rating 4</td>
<td>5</td>
</tr>
<tr>
<td>Rating 5</td>
<td>7</td>
</tr>
<tr>
<td>Rating 6</td>
<td>37</td>
</tr>
<tr>
<td>Rating 7</td>
<td>44</td>
</tr>
<tr>
<td><strong>Uppsala Conflict Data Program armed conflict fatalities</strong> (2014-2017 average) 4)</td>
<td></td>
</tr>
<tr>
<td>no armed conflicts (&lt; 25 fatalities p.a.)</td>
<td>29</td>
</tr>
<tr>
<td>minor armed conflicts (25 – 999 fatalities p.a.)</td>
<td>7</td>
</tr>
<tr>
<td>war (1,000 and more fatalities p.a.)</td>
<td>64</td>
</tr>
<tr>
<td>of these: more than 10,000 fatalities p.a.</td>
<td>59</td>
</tr>
</tbody>
</table>

Notes: For details on scales used, see Appendix A. Source: AZR, (2019); Freedom House, (2018); Gibney et al. (2018); Pettersson and Eck (2018). Authors’ calculations.

Table 2-1 classifies the origin countries of the German refugee population by levels of political terror, the oppression of political rights and civil liberties and the appearance of armed conflicts. As can be seen there, the overwhelming share of the refugee population in Germany stems from countries which are affected by widespread persecution, human rights violations and armed conflicts. 60 percent stem from countries where political terror affects the whole population, and another 20 percent from countries, where political terror is widespread, according to the classification of Political Terror Scale 2018 (Gibney et al., 2018), 2018). A similar picture appears if we consider the Freedom House Political Rights and Civil Liberties ratings: 56
percent of the refugee population come from countries where elementary political rights are totally and largely violated, and 81 percent from countries where civil liberties are largely restricted or totally oppressed (Freedom House, 2018). Finally, 64 percent stem from countries which are affected by war (defined as 1,000 and more fatalities from armed conflicts p.a.), 59 percent from countries where the annual death toll from armed conflicts averaged more than 10,000 persons p.a. in the years 2014 – 2017 according to the Uppsala Conflict Data Program 2018 (Pettersson & Eck, 2018). Moreover, another 7 percent come from countries which are affected by minor armed conflicts (defined as 25 to 999 fatalities p.a.).

These origin country characteristics are consistent with the self-reported motives for forced migration in the IAB-BAMF-SOEP Survey of Refugees: 88 percent of respondents claimed to have left their countries of origin due to war and civil war, persecution, or forced recruitment, 44 percent reported economic motives and 17 percent social motives (see Figure 2-1).

**Figure 2-1:** Self-reported migration motives of refugees in Germany, in percent

<table>
<thead>
<tr>
<th>Motive</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>war / persecution / forced recruitment</td>
<td>88</td>
</tr>
<tr>
<td>war</td>
<td>71</td>
</tr>
<tr>
<td>persecution</td>
<td>46</td>
</tr>
<tr>
<td>forced recruitment</td>
<td>41</td>
</tr>
<tr>
<td>discrimination</td>
<td>41</td>
</tr>
<tr>
<td>economic motives</td>
<td>41</td>
</tr>
<tr>
<td>personal economic situation</td>
<td>36</td>
</tr>
<tr>
<td>general economic situation</td>
<td>28</td>
</tr>
<tr>
<td>social motives (family / friends)</td>
<td>17</td>
</tr>
</tbody>
</table>

Notes: Multiple answers possible, dark bars report percentages of those who have reported at least one of the respective group of motives.


The acceptance rates of asylum applications reflect broadly these factors: 50 percent of the asylum applications were approved in the first-instance decisions by the Federal Office of Refugees and Migration (BAMF), 32 percent were declined, and 18 percent were “formal
decisions\textsuperscript{7} from 2015 to 2018 (AZR, 2019; BAMF, 2018b, 2018a). As of December 31, 2018, most of the 1.6 million persons with a refugee background either had a protection status (67 percent) or were tolerated (12 percent), with 1 percent obliged to leave the country on short notice, and 20 percent still in asylum proceedings (AZR, 2019). The difference in the protection rates between the asylum decision statistics and the refugee population stock can be attributed to several factors: a substantial share of asylum-seekers whose applications have been declined in first instance has received subsequent approval on legal appeal, some rejected asylum-seekers have already left Germany officially or non-officially, others may have changed their legal status by other channels, e.g. marriages.

Altogether, we can conclude that the overwhelming share of refugees in Germany stems from countries where the population is severely affected by war, persecution and human rights violations, and that these factors are the main drivers for refugee migration according to the self-reported migration motives. This is also broadly reflected by the approval rates of asylum claims and the legal status of the refugee population in Germany. As a consequence, it is very likely that large parts of the refugee population will stay in Germany.

2.2 \textit{The costs and risk of refugee migration and the German refugee migration surge}

Refugee migration involves higher risks and costs compared to other types of migration. The data from the IAB-BAMF-SOEP Survey of Refugees imply that the total costs for travelling to Germany average 5,300 EUROs. About 2,300 EUROs of those have been spend for the services of smugglers. As Figure 2-2 illustrates, the risks of refugee migration are high as well: 54 percent of the refugee population report that they have experienced shipwrecking (15 percent), physical violence (22 percent), arbitrary imprisonment (23 percent) or economically motivated crimes such as robbery, betrayal and blackmail during their travelling to Germany. The refugees taking the sea routes to Germany report these risks more often than the total refugee population suggesting that these risks are higher on the sea migration routes.

\textsuperscript{7} Formal decisions comprise cases which do not fall in the domain of the German jurisdiction since they have arrived via another state which is subject to the Dublin-Agreements (e.g. so-called “Dublin-cases”), where asylum applications have been withdrawn or where the applicants do not reside anymore in Germany.
Figure 2-2: Self-reported incidents during the refugee migration process, in percent

<table>
<thead>
<tr>
<th>Incident</th>
<th>Sea Routes</th>
<th>All Routes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Betrayal</td>
<td>27</td>
<td>29</td>
</tr>
<tr>
<td>Imprisonment</td>
<td>23</td>
<td>24</td>
</tr>
<tr>
<td>Violence</td>
<td>22</td>
<td>26</td>
</tr>
<tr>
<td>Blackmail</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Robbery</td>
<td>18</td>
<td>16</td>
</tr>
<tr>
<td>Shipwrecking</td>
<td>20</td>
<td>15</td>
</tr>
</tbody>
</table>

Notes: Multiple answers possible.

The costs and risks of refugee migration vary over time and are associated with changing migration routes. The evidence on the costs and risks along the flight routes shed also some light on the question whether German policies are responsible for the acceleration of refugee migration in 2015 and its subsequent decline. Some elementary facts are, however, calling the popular view that Angela Merkel’s policies have triggered the 2015 immigration surge into question. The proposition that the German government has opened the borders for refugees is largely based on Merkel’s decision to admit refugees from Hungary for humanitarian reasons in the night from September 4 to September 5, 2015. Figure 2-3 displays the monthly arrivals of asylum-seekers in Germany from the beginning of 2013 until the end of 2018. As the figure

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8 If there have been any policy changes affecting the admission of asylum-seekers before this date, they have made entry conditions more restrictive, e.g. by declaring further West Balkan countries as safe countries of origin.

9 The number of first-time asylum applications underrated the actual arrivals of asylum-seekers in Germany in 2015 since registration was delayed. Figure 2-5 refers, therefore, on arrival figures from the EASY accounting system from 2013 until the end of 2016. The EASY system which was used in Germany to allocate asylum-seekers across municipalities. Due to double counts, this system tends to overstate actual arrivals slightly. We refer to first-time asylum applications after 2016, since the EASY figures are not any longer available. Meanwhile asylum-
demonstrates, there is no visible break in the monthly arrival series following Merkel’s famous decision. The influx of refugees started to accelerate already at the beginning of the second quarter in 2015 and tended to grow continuously until November 2015, where the peak was achieved at 206,000 arrivals. It declined sharply thereafter and stagnates at 15,000 arrivals per month or less since March 2016, i.e. after the closure of the Western Balkan route and the ratification of the EU-Turkey Agreement.

Figure 2-3: Monthly refugee arrivals in Germany, 1/2013 – 12/2018 (persons)

Notes: 1/2013-12/2016: recorded arrivals by the EASY-accounting system; 1/2017 -12/2018: first-time asylum applications.

Source: EASY-accounting system, BAMF asylum statistics, authors’ calculations.

It is, thus, rather unlikely that the major part of the immigration surge in 2015 can be attributed to Chancellor Merkel’s decision on admitting refugees from Hungary. Interestingly enough, the micro data suggest that the main migration routes have changed long before the Merkel decision was undertaken and that these changes are associated with declining migration costs and risks.

Figure 2-4a displays the shares of the main migration routes by date of departure, Figure 2-4b the absolute number of arrivals by the main migration routes (in terms of individuals included in the sample). As we can see, the migration surge to Germany is associated with a shift in the

seekers are registered upon arrival without delays, such that the number of first-time asylum applications should coincide with the actual arrival figures after fall 2016.
main migration routes: while the Central Mediterranean route and the land routes have been the main routes chosen by refugees who departed in 2013 and 2014, the increasing refugee migration figures in 2015 are strongly associated with the emergence of the Eastern Mediterranean route. The EU-Turkey Agreement and the closure of the Western Balkan route in March 2016 is then correlated with both a sharp decline in absolute arrival figures as well as with a decline in the relative share of the Eastern Mediterranean route.

The shift in migration routes coincides with declining costs of refugee migration: the mean migration costs have fallen from some 6,600 to 4,900 EUROs or by 25 percent from 2014 to 2015, the median migration costs from 4,200 to 3,000 EUROs or by 29 percent in the same time span (Figure 2-5). This decline in migration costs can be largely attributed to a reduction on the Eastern Mediterranean route and by the switching of refugees to the least costly route.

This shift in migration routes is also associated with lower shipwrecking risks in 2015, although the relationship is not uniform. While in 2014 25.4 percent of the refugees who migrated through the sea routes to Germany became victims of shipwrecking, this rate declined to 19.5 percent in 2015. As can be seen in Figure 2-6, the shipwrecking risk of the refugee arrivals was particularly low in the first three quarters of 2015 when refugee migration figures surged in Germany but have increased again in the fourth quarter.

Needless to say, these descriptive figures can only provide some hints to the actual causes of the refugee migration surge in Germany, we cannot draw any causal conclusions. Nevertheless, the descriptive facts call the ‘border opening’ narrative into question: First, refugee arrival figures started to surge long before the Merkel decision and there is no structural break in the immigration data visible after it. Second, the increasing number of arrivals coincides with the shift of migration routes towards the Eastern Mediterranean Sea and the associated decline in migration costs and risks relative to other routes. Third, the EU Turkey Agreement and the closure of the Western Balkan route have involved a substantial decline in arrival figures both along the Mediterranean route as well as the number of overall arrivals. Thus, the strategy of Chancellor Merkel to close the outer borders of the EU instead of closing the German borders seem to have effectively curbed the inflow of refugees eventually, although the refugee arrivals achieved high figures before these policies became effective.
**Figure 2-4a**: Main migration routes by departure date, 1/2013 – 4/2016, share of route in percent of total arrivals by departure date (quarterly data)

**Figure 2-5b**: Arrivals by main migration routes and departure date, 1/2013 – 4/2016, absolute number of arrival observations in sample (N=5,600) by departure date (quarterly data)

*Source: IAB-BAMF-SOEP Survey of Refugees 2016 and 2017, weighted, authors’ calculations*
Figure 2-5: Total costs and smuggling costs, 1/2014 – 4/2015. Mean self-reported costs in EUROs by quarter of departure

Source: IAB-BAMF-SOEP Survey of Refugees 2016 and 2017, weighted, authors’ calculations

Figure 2-6: Shipwrecking risk of refugees on the sea routes, 1/2014 – 4/2015, in percent.

Notes: Only individuals who reported to be victims of shipwrecking are considered.

Source: IAB-BAMF-SOEP Survey of Refugees 2016 and 2017, weighted, authors’ calculations.
3 Self-sorting of refugees

Refugees are, similar to other migrants, not a random selection of the origin country population. While traditional self-selection theories predict that the sorting of migrants with respect to their skills and other abilities is determined by the relative returns of those in sending and receiving countries and by the costs of migration, the case is less straightforward for forced migrants. Sometimes it is speculated that persecution may lead to reverse selection (Borjas, 1987) or that forced migration mitigates the selection bias (Chiswick, 1999). In contrast, recent theories of refugee selection predict (Aksoy & Poutvaara, 2019) that sending country risk tends to improve the skill-selection of forced migrants, while migration risk tends to have a detrimental impact (Section 3.1). The descriptive evidence on the skill-selection indeed supports the view that the refugee population in Germany is favorably skill-selected (Section 3.2). The threats of armed conflicts and persecution in origin countries as well as the costs and risks of refugee migration affect not only the skill-selection of the refugee population. Refugees might be also selected along other dimensions: The gender- and age-specific risks will affect also the selection according to demographic characteristics (Section 3.3). Moreover, persecution and other types of human rights violations might affect disproportionally religious and politically minorities which has an impact on values and attitudes such as religious convictions and the support for democratic values and minority rights (Section 3.4). Finally, the experiences of war, persecution, human rights violations and the risks of refugee migration may affect the selection or the refugee population according to behavioral characteristics or even change those characteristics (Section 3.5). All these different dimensions of selection are discussed in the following sub-sections of this Chapter, given that they may affect later chances for integration in one way or another.

3.1 Theoretical background

Self-selection theory predicts that the socio-economic structure of migrants is determined by relative returns to skills and non-observable abilities in the labor markets at destination and origin countries as well as by migration costs (Borjas, 1987; Chiswick, 1999; see also the empirical evidence provided by, e.g., Belot & Hatton, 2012; Brücker & Defoort, 2009; Chiquiar & Hanson, 2005; Grogger & Hanson, 2011). Higher returns to skills or a higher inequality of earnings in destination countries relative to sending countries tend to improve the selection with respect to skills or abilities relevant to the earnings potential of migrants and vice versa. Higher migration costs tend to affect the skill- or earnings selection positively if they are a fixed amount or tend not to grow proportionally with the income level.
Askoy and Pooutvaara (2019) have outlined a skill-selection model of refugees in the spirit of Borjas (1987). A simplified deterministic version of this model which captures the key results can be sketched as follows. Assume that expected utility of an individual staying in a country affected by war and human rights violations is given by

\[ EU_0 = (1 - p) \ln w_0 - p L_0, \]

where \( EU_0 \) denotes expected utility in country 0, \( p (0 \leq p \leq 1) \) the probability that a severe risk such as a bomb attack or maltreatment occurs, \( L_0 (L_0 > 0) \) the associated loss, and \( \ln w_0 \) the log wage. Similarly,

\[ EU_1 = (1 - q) \ln w_1 - q L_m \]

is the expected utility from moving to country 1, where \( q (0 \leq q \leq 1) \) denotes the migration risk (e.g. shipwrecking), and \( L_m \) the loss associated with the realization of the migration risk. The log wages in origin 0 and at destination 1 are given by

\[ \ln w_0 = a_0 + b_0 s \]

and

\[ \ln w_1 = a_1 + b_1 s - c, \]

where \( a_0 \) and \( a_1 \) are the minimum wage levels for less skilled workers, \( b_0 \) and \( b_1 \) the returns to skill \( s \) at origin and destination. \( c \) is the time-equivalent migration costs which may arise due to lower productivity at destination caused by incomplete human capital transfer or imperfect language proficiency. This delivers the index function \( I = EU_1 - EU_0 \), where an individual migrates if \( I > 0 \):

\[ I = [(1 - q) b_1 - (1 - p) b_0] s + (1 - q) a_1 - (1 - p) a_0 + p L_0 - q L_m - c. \]

The partial derivative with respect to the skill level is then

\[ \frac{\partial I}{\partial s} = (1 - q) b_1 - (1 - p) b_0. \]

Thus, refugees are positively skill-selected if \((1 - q) b_1 > (1 - p) b_0\) and negatively if \((1 - q) b_1 < (1 - p) b_0\). This implies that the likelihood of positive skill-selection increases with the risk of armed conflicts and maltreatment in origin countries and tends to decrease with the migration risk.

Recent theoretical contributions to the literature have transferred the established skill-selection model of Borjas (1987) to the specific circumstances of refugee migration (Aksoy & Poutvaara, 2019, Box 3-1). They suggest that the origin country risks caused by armed conflicts and persecution and migration risks have ambiguous effects on the selection of refugees with respect to skills and other types of talent. Armed conflicts, persecution and other forms of human rights violations in sending countries do not only create risks for life, physical and mental well-being which may affect all social and economic groups in sending countries uniformly. They also involve economic risks, e.g., in terms of earnings or wealth, which reduces expected utility from staying at the origin for those with higher education and other abilities.
disproportionally. This, in turn, affects the skill and talent distribution of refugees positively. In contrast, refugee migration risks may have an adverse impact on the skill selection since they tend – beyond general threats affecting all social groups uniformly – to reduce also expected income at destination, which has an adverse impact on migration incentives for individuals with higher skills and talent.

Thus, sending country risks affect the skill- or ability selection positively, while the converse is true for refugee migration risks. It is important to note that this result is derived from the assumption that country and migration risks affect the well-being of individuals not only in general terms, but also have an impact on the expected earnings potential in sending and destination countries. In contrast, models which suppose that the sending country risk creates a disamenity for all individuals in the same way and ignore the effects on earnings and other economic risks, tend to conclude that refugees are less selected on characteristics associated with labor market success (Chin & Cortes, 2015).

### 3.2 Income- and skill-selection

The available descriptive evidence in Germany supports the hypothesis that refugees are favorably self-selected in terms of economic status and skills relative to the sending country population (see also Aksoy & Poutvaara, 2019; Guichard, 2017). As Figure 3-1 shows, the refugee population in Germany is disproportionally drawn from the upper tail of the distribution of economic status according to the refugees’ self-assessment: while 39 percent of the refugee population in Germany reports that their economic status has been “somewhat above” or “well above” the average economic status of the home country population before crises, war and conflicts have unfolded there, 22 percent report that it has been “somewhat below” or “well below”.

---

10 The following question was asked in the survey: “Consider the time before crisis, war and conflict. How would you assess your economic situation in comparison to others in your home country? (1) Well above average, (2) somewhat above average, (3) at average, (4) somewhat below average, (5) well below average.”
**Figure 3-1:** Selection of refugees in terms of economic status before war and crisis, shares in percent.

![Figure 3-1: Selection of refugees in terms of economic status before war and crisis, shares in percent.](image)

*Notes:* Self-reported economic status relative to home country population average.

*Source:* IAB-BAMF-SOEP Survey of Refugees 2016 and 2017, weighted, authors’ calculations

The skill-selection of the refugee population in Germany follows a similar pattern. Figure 3-2 displays for the three main origin countries – Syria, Iraq and Afghanistan– the education levels of the refugee population and the home country population by the International Standard Classification of Education (ISCED). At the upper end of the skill spectrum, individuals with tertiary or upper-secondary education represent 48 percent of the Syrian refugees in Germany compared to 19 percent of the home country population in Syria (a factor of 2.5), 29 percent of the Iraqi refugees compared to 13 percent in the home country population (a factor of 2.2), and 22 percent of the Afghan refugees compared to 20 percent of the home country population (a factor of 1.4). Analogously, at the lower end of educational spectrum, 32 percent of the Syrian refugees in Germany have primary or no schooling compared to 60 percent in the Syrian population, 53 percent of the Iraqi refugees compared to 81 percent in the home population and 58 percent of the Afghan refugees compared to 73 percent in the home population.
Figure 3-2: Skill-selection of refugees from Syria, Iraq and Afghanistan in Germany. Education levels (ISCED) of the refugee and home country population, shares in % (age 18+).


Although refugees are favorably self-selected regarding their education levels compared to their countries of origin, there is a substantial skill-gap relative to the German population on average (Brücker et al., 2019). As Table 3-1 indicates, schooling levels are heavily polarized among the refugee population, with large shares possessing upper-secondary or polytechnical education, or conversely, having only primary or no education at all. At the upper end of the skill spectrum, 42 percent have attended (and 35 percent completed an education from) upper-secondary or polytechnical schools, compared to 40 percent of the overall German population (Destatis, 2018). In turn, another 32 percent has attended (and 22 percent completed an education from) secondary schools, compared to 55 percent of the overall German population. Crucially, a much larger share of the refugee population has limited or no education, compared to the overall German population. While only one-tenth of the adult population in Germany has not completed secondary education (Destatis, 2018), 42 percent of the refugee population left school without a secondary school diploma or only a primary schooling degree, and 13 percent possess no school education at all. Many refugees have interrupted their educational biographies, as illustrated by the difference between attendance and completion rates; this is

---

11 On average, such a schooling degree requires 12 years of schooling.
often linked to the outbreak and duration of armed conflicts. Origin countries with a long history of war and civil war such as Afghanistan and Iraq display particularly low schooling levels and completion rates, while countries with a relatively recent history of war and armed conflicts such as Syria still perform relatively favorable (Brücker et al., 2016, 2017). We can, thus, conclude that the refugee population in Germany achieves participation and completion rates at the upper end of the skill-spectrum (upper-secondary schools) which are only slightly below levels in Germany. However, much higher shares of individuals have only primary or no schooling at all.

**Table 3-1:** Education levels of the refugee population in Germany by gender, in percent (age: 18+)

<table>
<thead>
<tr>
<th>Type of school</th>
<th>School attendance</th>
<th>Schooling degree</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>Men</td>
</tr>
<tr>
<td>No school</td>
<td>13</td>
<td>11</td>
</tr>
<tr>
<td>Primary school</td>
<td>13</td>
<td>13</td>
</tr>
<tr>
<td>Secondary school</td>
<td>32</td>
<td>33</td>
</tr>
<tr>
<td>Upper secondary school</td>
<td>38</td>
<td>39</td>
</tr>
<tr>
<td>Other school (e.g. polytechnical school)</td>
<td>4</td>
<td>4</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Observations</td>
<td>5,194</td>
<td>3,127</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Type of educational institution</th>
<th>Vocational training and university attendance</th>
<th>Vocational training and university degrees</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>All</td>
<td>Men</td>
</tr>
<tr>
<td>No professional training</td>
<td>75</td>
<td>74</td>
</tr>
<tr>
<td>Vocational training</td>
<td>8</td>
<td>9</td>
</tr>
<tr>
<td>College/University/Doctorate</td>
<td>17</td>
<td>18</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Observations</td>
<td>5,486</td>
<td>3,321</td>
</tr>
</tbody>
</table>

*Source: IAB-BAMF-SOEP Survey of Refugees 2017, weighted, authors’ calculations.*

The gap between the German and the refugee population is even larger in the area of vocational training and post-secondary education. Only 8 percent of the refugee population have attended (and 5 percent completed) vocational training, while 17 percent have attended (and 11 percent completed) university or college (Table 3-1). This compares to 59 percent of the German adult population with vocational training degrees and a further 18 percent with a university or college education (Destatis, 2018).

The low levels of individuals with tertiary and especially vocational training degrees are a substantial hurdle for the labor market integration of refugees. This is particularly true for the German labor market, which places very high importance on professional degrees and
certificates vis-à-vis Anglo-Saxon countries, in part because of the dominance of its dual vocational training system (e.g., Allmendinger, 1989). The refugee population in Germany seems to be aware of this fact: about 45 percent have reported in the survey that they plan to acquire a (further) school degree in Germany, while 68 percent reported that they are considering participating in vocational training or attending a university in Germany (Brücker et al., 2019).

3.3 Gender- and demographic selection

The characteristics of the population with a refugee background in Germany attest to the risks and difficulty of refugee journeys. First, refugees are disproportionately young: 77 percent of adult males and 62 percent of adult females were 35 years or younger in 2017 (compared to 26 and 24 percent of the German population respectively). This represents also a younger age structure than other migrant arrivals (62 percent of male arrivals were 35 years or younger in 2018).\(^\text{12}\) Second, the refugee population is mainly male: 73 percent of the adult refugees are male, 27 percent female (compared to 57 males and 43 females among total adult migrant arrivals in 2018).

The specific gender- and age selection of refugees corresponds to substantial differences in the family and household structures of the refugee population by gender: More than half of male refugees in an age of 18 years and older were single, compared to only 24 percent of the females (Table 3-2). 67 percent of the adult females, but only 21 percent of the males live in households with children. 17 percent of the adult women, but only 2 percent of the men, are single-parents. These differences in the family structures by gender are shaping the integration process of males and females, as discussed in Chapter 4: females with children, particularly with toddlers, have fewer opportunities to take part in integration measures such as language programs, participate less in education and, eventually, have substantially lower employment rates compared to their male counterparts.

\(^\text{12}\) The figures for the refugee population have been taken from the IAB-BAMF-SOEP Refugee Survey (weighted values), the figures for the German population average from microcensus data (DESTATIS, 2018) and on the other migrant arrivals from the Central Register of Foreigners (DESTATIS, 2019).
### Table 3-2: Family- and household status of the refugee population by gender, in percent.

<table>
<thead>
<tr>
<th>Family- and household status</th>
<th>All</th>
<th>Men</th>
<th>Women</th>
</tr>
</thead>
<tbody>
<tr>
<td>Single</td>
<td>44</td>
<td>51</td>
<td>24</td>
</tr>
<tr>
<td>of these: without children</td>
<td>41</td>
<td>50</td>
<td>15</td>
</tr>
<tr>
<td>with children</td>
<td>3</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>of these: with toddlers&lt;sup&gt;1)&lt;/sup&gt;</td>
<td>1</td>
<td>0</td>
<td>2</td>
</tr>
<tr>
<td>With spouse in household</td>
<td>36</td>
<td>27</td>
<td>61</td>
</tr>
<tr>
<td>of these: without children</td>
<td>9</td>
<td>8</td>
<td>11</td>
</tr>
<tr>
<td>with children</td>
<td>27</td>
<td>19</td>
<td>50</td>
</tr>
<tr>
<td>of these: with toddlers&lt;sup&gt;1)&lt;/sup&gt;</td>
<td>15</td>
<td>10</td>
<td>28</td>
</tr>
<tr>
<td>With spouse out of household</td>
<td>19</td>
<td>21</td>
<td>12</td>
</tr>
<tr>
<td>of these: without children</td>
<td>16</td>
<td>20</td>
<td>5</td>
</tr>
<tr>
<td>with children</td>
<td>3</td>
<td>1</td>
<td>8</td>
</tr>
<tr>
<td>of these: with toddlers&lt;sup&gt;1)&lt;/sup&gt;</td>
<td>1</td>
<td>0</td>
<td>3</td>
</tr>
<tr>
<td>With children in household</td>
<td>33</td>
<td>21</td>
<td>67</td>
</tr>
<tr>
<td>of these: with toddlers</td>
<td>17</td>
<td>10</td>
<td>33</td>
</tr>
<tr>
<td>Others/unclear</td>
<td>2</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Total</td>
<td>5,444</td>
<td>3,293</td>
<td>2,151</td>
</tr>
</tbody>
</table>

Notes: All figures on children refer to own children residing in the same household. Figures referring to less than 10 observations in the survey are marked in italics. 1) Toddlers are defined as children of ages three years and younger.

Source: IAB-BAMF-SOEP Survey of Refugees 2017, weighted, authors’ calculations.

### 3.4 Selectivity of religious affiliations, values and attitudes

Refugee migration has triggered widespread concerns in the public audience and among policymakers that the influx of individuals from countries which lack democratic traditions and from Islamic religious cultures may constitute a threat for democracies, free societies and social cohesion in destination countries. Those concerns are also voiced in the academic debate (e.g., Betts & Collier, 2017; Collier, 2013; Miller, 2016), although the attribution of certain cultural and religious traditions with certain political and institutional settings such as the support for democracy has been criticized as unfounded by many scholars (e.g., Sen, 2007). Moreover, experiences of armed conflicts and persecution may also affect the selection of refugees in terms of their convictions and values relative to the home country average, given that ethnic and religious minorities or individuals with oppositional political values and attitudes face higher risks of becoming victims of persecution and other human rights violations.

Figure 3-3 displays the religious affiliations of the refugee population and the home country populations for the three main origin countries of the German refugee population (Afghanistan, Iraq and Syria). As can be seen, religious minorities such as the Alawites in Afghanistan or the group with other religious affiliations (mainly Yezidis) in Iraq are disproportionally represented in the refugee- compared to the home country population. The same is true for individuals with
no religious affiliations or Christian convictions in all three countries. In contrast, the ruling Alevite minority from Syria is not represented among the Syrian refugee population in Germany.

**Figure 3-3:** Religious affiliations of the home country and refugee population from Afghanistan, Iraq and Syria in Germany, in percent.

![Figure 3-3](image)

**Notes:** The religious affiliations of the refugee population are taken from the IAB-BAMF-SOEP Survey of Refugees, those of the home country populations from Maoz and Henderson (2013).

**Source:** IAB-BAMF-SOEP Survey of Refugees 2016, weighted, authors’ calculations. Maoz and Henderson (2013).

Correspondingly, the data hint to the fact that the refugee population may be selective in terms of values and convictions. This conclusion is further supported by the available evidence on the democratic values and attitudes of the refugee population. Based on questions in the IAB-BAMF-SOEP Survey of Refugees which correspond to the same items in the World Value Survey, Figure 3-4 compares the democracy values and convictions of the refugee population with those in the home country populations\(^\text{13}\) and the German population.

\(^{13}\) The World Value Survey (WVS) is carried out in many countries of the world and covers also many origin countries of refugee migration. For countries where no data were available, surveys from neighboring countries have been used for an approximation.
Figure 3-4: Democracy values of home country population, refugee population and German population

Notes: The response scale vary depend on the question and the dataset. Either they have been divided into an upper approval category and a lower rejection category. Or, with an odd number of categories, a neutral middle category was coded as "no answer". For home country population we considered respondents from crisis countries. Crisis countries include: Egypt, Algeria, Iraq, Yemen, Libya, Palestine (Syria, Afghanistan or Eritrea are not included in the World Value Survey, WVS).


On the one hand, we observe surprisingly high similarities in democracy values between the refugee and the German population (Figure 3-4). On the other hand, there are striking differences to the home country populations: While almost half of the population in the home countries of refugee migration support the statement that countries should be governed by strong leaders without parliamentary control, only one-fifth of the refugee population shares this view similar to the German population average. Moreover, refugees support the respect of civil rights and minority rights with higher shares than the home country- and German population and show a high preference for redistributive policies. Finally, while in the home countries about half of the population agrees with the statement that religious leaders shall enforce laws, only 18 percent of the refugee and 9 percent of the German population supports this view. We can thus conclude that there is a strong support among the refugee population for democratic values and the respect of civil and minority rights which is in some respects even larger than in the German population. Although almost one-fifth of the refugee population calls
the separation of state and religious affairs into question, this share is much smaller than in the origin country population. Against this background, widespread concerns that convictions and values of the refugee population might create a threat to democracy and the values of open societies is not supported by the available empirical evidence.

3.5 Selectivity of personal traits

The experience of migration is likely to select for personality in ways that could have relevance to social and economic integration. On the one hand, the psychological wellbeing of asylum-seekers and refugees is likely to be destabilized by personal experiences of war, violence, and persecution. On the other hand, the high risks and cost of refugee migration may positively select among people who experience such challenges in terms of resilience and other personal characteristics (Dustmann, Fasani, Frattini, Minale, & Schönberg, 2017). In order to shed some light on the personality traits of refugees, the IAB-BAMF-SOEP-Survey of Refugees has examined some well-established socio-psychological concepts (see also Brenzel et al., 2018 for further details). The findings are compared with those for the native and total immigrant population from the general SOEP household survey in Germany, which uses the same concepts.14

Table 3-3: Risk preferences

<table>
<thead>
<tr>
<th></th>
<th>Refugees</th>
<th></th>
<th>German population w/o and with migration background</th>
<th></th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Wave 1</td>
<td>Wave 2</td>
<td>w/o</td>
<td>with</td>
<td>Wave 1 – wave 2</td>
</tr>
<tr>
<td>Mean</td>
<td></td>
<td></td>
<td>5.05</td>
<td>4.83</td>
<td>-0.92 ***</td>
</tr>
<tr>
<td>Observations</td>
<td>2,411</td>
<td>2,463</td>
<td>13,691</td>
<td>5,417</td>
<td></td>
</tr>
</tbody>
</table>

Notes: *p < 0.10, **p < 0.05, ***p < 0.01. w/o = without. In the refugee population only individuals were considered who have participated in wave 1 and 2.

Source: IAB-BAMF-SOEP Survey of Refugees 2016 and 2017, weighted, authors’ calculations

Somewhat surprisingly, refugees are less inclined to take risks than the population in Germany without and with a migration background on average (Table 3-3). While the gap in risk preferences relative to the German population was relatively moderate in the first survey year, it has increased considerably in the repeated survey one year later. Possible explanation is that

14 Unfortunately, the empirical evidence on the personal traits in most origin countries of refugee migration is scant such that we cannot compare the selectivity regarding home country populations.
reflections of the risks in the origin country and on the refugee migration process may reduce inclinations to take further risks.

Beyond the relatively low risk preferences, refugees indicate many personal characteristics which may facilitate labor market and social integration in Germany: The data suggest the asylum and refugee population to be significantly more self-confident than both the native population without a migration background and other (non-humanitarian) migrants in Germany (Table 3-4). This is a remarkable result given large parts of the refugee population have been non-employed, which reduces usually the level of self-confidence substantially (Goldsmith, Veum, & William, 1996). Relative to the German population without and with migration background, the refugee population displays relatively high values for positive reciprocity (i.e., returning favors), and low values for negative reciprocity (i.e., retaliating). This hints that the refugee population has a strong social orientation which may facilitate social and labor market integration in host countries.

**Table 3-4: Self-confidence and reciprocity**

<table>
<thead>
<tr>
<th></th>
<th>Refugees</th>
<th>German population with and w/o migration background</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>w/o</td>
<td>with</td>
<td>Refugees w/o</td>
</tr>
<tr>
<td>Self-confidence</td>
<td>6.27</td>
<td>5.52</td>
<td>0.75 ***</td>
</tr>
<tr>
<td>Positive reciprocity</td>
<td>6.63</td>
<td>5.81</td>
<td>0.82 ***</td>
</tr>
<tr>
<td>Negative reciprocity</td>
<td>1.87</td>
<td>2.80</td>
<td>-0.93 ***</td>
</tr>
<tr>
<td>Observations</td>
<td>2,333</td>
<td>13,677</td>
<td>5,280</td>
</tr>
</tbody>
</table>

*Notes:* *p < 0.10, **p < 0.05, ***p < 0.01. w/o = without. In the refugee population only individuals were considered who have participated in wave 1 and 2.

Source: IAB-BAMF-SOEP Survey of Refugees 2016 and 2017, weighted, authors’ calculations

The survey covers also the “Big Five” model which classifies the personality of individuals along five main psychological dimensions (Barrick & Mount, 1991). Compared to the German population without and with migration background, refugees display more openness, extroversion, agreeableness, and conscientiousness, but lower values of neuroticism, according to questions that draw on the “Big-Five” personality traits (Table 3-5).

15 The concept of positive reciprocity refers to exchange of favors, while the concept of negative reciprocity refers to the revenge for injustice, for instance.
Table 3-5: The “Big Five” personal traits of refugees in comparison to the German population.

<table>
<thead>
<tr>
<th></th>
<th>Refugees</th>
<th>German population with and w/o migration background</th>
<th>Difference</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>w/o</td>
<td>with</td>
<td>Refugees –w/o</td>
</tr>
<tr>
<td>Openness</td>
<td>5.58</td>
<td>4.60</td>
<td>4.68</td>
</tr>
<tr>
<td>Conscientiousness</td>
<td>6.37</td>
<td>5.81</td>
<td>5.94</td>
</tr>
<tr>
<td>Extroversion</td>
<td>5.39</td>
<td>5.07</td>
<td>4.98</td>
</tr>
<tr>
<td>Agreeableness</td>
<td>6.47</td>
<td>5.37</td>
<td>5.50</td>
</tr>
<tr>
<td>Neuroticism</td>
<td>3.36</td>
<td>3.88</td>
<td>4.04</td>
</tr>
<tr>
<td>Observations</td>
<td>2,529</td>
<td>5,220</td>
<td>1,068</td>
</tr>
</tbody>
</table>

Notes: * p < 0.10, ** p < 0.05, *** p < 0.01. w/o = without. In the refugee population only individuals were considered who have participated in wave 1 and 2.

Source: IAB-BAMF-SOEP Survey of Refugees 2016 and 2017, weighted, authors’ calculations

Previous research has found that high levels of self-confidence, openness, extroversion, agreeableness, conscientiousness, and positive reciprocity are positively correlated with economic success in the labor market (Bowles, Gintis, & Osborne, 2001; Brenzel & Laible, 2016; Nyhus & Pons, 2005). Drawing on this existing research, the results from the IAB-BAMF-SOEP Survey of Refugees thus suggest that the personal traits of the asylum and refugee population might be favorable with respect to their chances for social and economic integration.

3.1 Discussion

Our findings indicate that the refugee population in Germany is in several dimensions a very selective part of the home country population. Self-selection theory predicts that origin country risks may affect the selection with respective to skills or other abilities relevant for labor market outcomes positively, while the converse is true for migration risks. The empirical data suggest that the refugee population is indeed positively skill-selected relative to the home country population, but that a considerable skill-gap between the German population average and the refugee population exists. This skill-gap is less pronounced for (formal) levels of schooling, but substantial in terms of the shares with professional degrees, in particular vocational training degrees. This is a severe impediment for labor market integration in Germany, given that labor market institutions there rely heavily on certificates.

War, persecution and migration risks seem to have affected the selectivity of the refugee population also with respect to other dimensions: the refugee population is disproportionately male and young compared not only to the German population average, but also to other
migrants. This has also the important implications for the household and family structure: while most females live with their partners and children in a household, a high share of males is single and has no children. Moreover, the refugee population supports democratic values at the same or higher levels than the German population, while distinct differences to the origin country population appear. Finally, war, violence and persecution has shaped traits in the personality characteristics of the refugee population e.g. via a disproportionally low inclination to take risks or low values for the locus of control items. At the same time, high degrees of openness, conscientiousness, extroversion and agreeableness and low levels of neuroticism among the “Big Five” personality characteristics suggest favorable personal preconditions for labor market integration. Overall, the strong selection bias of the refugee population is likely to facilitate the integration into the economy and society. In turn, the higher shares of the refugee population without professional degrees may create a severe impediment to labor market integration.
4 Integrating refugees: empirical evidence from Germany

Though finding employment would be essential for their integration in the host country, refugees are typically in a disadvantaged position compared to other migrants (Bevelander, 2011). This is not surprising, given that they are less prepared to migration and often have much larger legal and other institutional hurdles to overcome. In particular, the followings aspects hinder integration in one way or another: First, refugees often suffer from major breaks in their labor market-related biographies (e.g., educational deficiencies, interruptions in work experience) which have been triggered by the political, economic and societal situation in their home or transition countries. Second, the migration of refugees is typically exogenously driven: less voluntary and often unexpected (e.g., due to wars, genocide, and persecution). As a result, they may lack opportunities to prepare for their migration and improve their integration prospects before arrival in a safe destination country. In contrast, other migrants’ decisions to move to another country are often conscious which gives an advantage in learning the language of the host society and a priori gathering relevant information about the labor market opportunities there. The labor market integration of refugees is therefore often delayed compared to other migrants. Third, institutional hurdles such as legal uncertainty during the asylum procedure, legal restrictions for the labor market access or mobility restrictions may further hinder the labor market integration of refugees.

Within this context, our study particularly focuses on the legal and institutional determinants of integrating refugees into the labor markets of host countries and the most important integration program, language courses. To establish the stylized facts on the state of integration, the current chapter will provide, first, a historical overview on integration trajectories of refugees in Germany, followed by empirical evidence on the development of labor market integration of the recently arrived cohorts of humanitarian migrants in Germany.

4.1 Labor market integration: historical perspective and current status

4.1.1 Employment Rates

As depicted in Figure 4-1, refugees have historically taken longer to enter work than other migrants in Germany. While the employment rate of both groups eventually reaches 70

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16 When analyzing the evolution of the labor market integration outcomes of the recently arrived refugee cohorts, we can draw on a benchmark for other immigrants, using the IAB-SOEP Migration Sample which provides a database on immigrant cohorts since the beginning of the 1990s.
percent, it takes twice as long for refugees as for other migrants (14 versus six years on average) to achieve this.

**Figure 4-1**: Historical employment rates of refugees and other migrants by arrival year, in percent.

![Chart showing historical employment rates of refugees and other migrants by arrival year, in percent.](chart.png)

*Notes*: Persons who work full-time and part-time, work marginally or are in company training are counted as employed. We referred to the IAB-SOEP Migration Sample question on the category that describes respondents’ legal status upon arrival in Germany to distinguish between refugees (= arrived as ‘as an asylum-seeker or refugee’) and other migrants (= otherwise). Only individuals who were from 16 to 64 years old at the time of first employment (in the IEB data) are considered. The sample covers migrants who arrived in Germany in the period from 1990 to 2013, i.e. before the 2015 refugee immigration surge.

*Source*: IAB-SOEP Migration sample (Waves 1, 2, 3) linked to the Integrated Employment Biographies (IEB) data, own calculations.

Data from the IAB-BAMF-SOEP Survey of Refugees suggests that a similar trajectory can be expected for recent cohorts of humanitarian immigrants (Brücker et al., 2019). In total, 21 percent of all refugees who have moved in since 2013 went into gainful employment in the second half of 2017. As Figure 4-2 illustrates, the employment rate increases with the length of stay: 9 percent of 2016, 20 percent of the 2015 and 36 percent of the 2014 arrivals were employed in the second half of 2017.
Figure 4-2: Average employment rate of refugees by year of arrival in 2017\(^1\), in percent.

\[\begin{array}{cccccc}
2013 & 2014 & 2015 & 2016 & \text{all arrival years} \\
37 & 36 & 19 & 9 & 21 \\
\end{array}\]

\(^1\) Average employment rate of refugees at the time of the survey in the 2nd half of 2017.

Notes: All individuals between 18 and 65 in full time, part time, marginal, or irregular employment or in an apprenticeship are defined as being employed (including self-employed).


From the Federal Employment Agency's process data, it can be estimated that 35 percent of the refugee population in working age which has arrived since the beginning of 2015 is in employment by October 2018.\(^1\) This is slightly faster compared to past refugee immigration episodes in Germany. The gross average monthly earnings of full-time workers are about 1,600 Euros, which is 55 % of the level of all dependent full-time employees in Germany (Brücker et al., 2019). However, it has to be noted that a considerable share works in part-time employment, internships and training.

4.1.2 Labor market experience

The lack of vocational training degrees constitutes an important hurdle for integration since the German labor market is structured by the dual vocational training system such that professional certificates have a much higher relevance for entry and professional careers compared to countries with Anglo-Saxon labor market institutions (Allmendinger, 1989). Only 8 percent of refugees have attended vocational training institutions (5 percent have completed their training).

\(^{17}\) To approximate labor market integration, the ratio of the employment growth to the growth of the population in working age (15 to 64 years) has been calculated for the population from the eight main sending countries of refugees in Germany for the time period from December 31, 2014 to October 31, 2018. For an outline of the method see (Brücker, 2018).
and 17 percent attended university (11 percent have completed their studies) (see chapter 2). However, large parts possess – despite the young age structure of the refugee population – considerable labor market experience and have acquired professional skills (informally) on the job: Three quarters of males and more than one-third of females in an age of 18 and older have had work experience before arrival in Germany, either in the country of origin or in transit countries (Brücker et al., 2019). The work experience of those who have worked lasted for 10 years on average.

Figure 4-3 provides an overview on refugees’ occupational positions before migration. 30 percent of the refugees have been blue-collar workers before arrival, 33 percent white-collar workers, 3 percent civil-servants and 34 percent self-employed. Regarding skill levels in the job, 15 percent of the refugees with work experience have performed assistant tasks with low levels of complexity, 65 percent qualified professional tasks (i.e. tasks which require vocational training skills), 6 percent complex specialized tasks (e.g. complex technical tasks) and 15 percent highly complex expert tasks (e.g. engineers, physicians, lawyers). Accordingly, the distribution of skill-levels required in jobs carried out before migration roughly corresponds to the skill-structure of jobs among the German workforce.

Bringing together, the data implies a relatively rich work experience of refugees. In fact, refugees seem to have performed more complex professional tasks than one might suspect at first glance based on the rather low shares with vocational training degrees and university studies.
**Figure 4.3:** Occupational position of refugees before arrival in Germany, in percent.

Notes: Only individuals aged between 18 and 65 are considered.


### 4.1.3 Skill Mismatch

Despite considerable work experience and worked tasks complexity described above, not all refugees succeed in transferring their human capital acquired in the home countries to the German labor market and finding a job suitable for gaining qualifications. Combining information on education, vocational training and occupations and working experience before immigration, Figure 4.4 illustrates a comparison of qualifications acquired before immigration with qualification requirements for employment actually carried out in Germany.\(^{18}\) While

\(^{18}\) Qualifications acquired were measured based on the International Standard Classification of Education (ISCED) of the OECD; qualification requirements were measured based on the classification of occupations (KldB) of the IAB and the Federal Employment Agency (BA) – the model of the job structure in Germany. The KldB includes four groups of professions: 1) helpers (unskilled or semi-skilled activities which require no vocational qualification or regular one-year vocational training), 2) skilled labor (skilled activities which require at least two years of vocational training, also graduation from vocational school), 3) specialists (complex specialist activities which require qualification as master craftsman or technician or equivalent technical school or college graduation, also...
almost one-third are overqualified for their performed job and a quarter has not acquired the formally qualifications, 44 percent have jobs that adequately match their qualifications.

**Figure 4-4:** Congruence between qualification of refugees and the required skill level in their jobs

![Bar chart showing the distribution of qualification levels among refugees in their current jobs.]

- **Total:** 31% below qualification, 44% adequate, 25% over qualification.
- **Specialists and experts:** 81% below qualification, 19% over qualification.
- **Skilled:** 45% below qualification, 52% adequate, 3% over qualification.
- **Semi- and unskilled:** 51% below qualification, 49% adequate.

*Notes:* Only individuals aged between 18 and 65 are considered.


Decompositions according to qualification level suggest that refugees with academic qualifications (experts/specialists) face higher risk to end up in the jobs for which they are formally overqualified than skilled refugees. On the other hand, considerable parts of the refugees who do not have formal vocational qualifications are employed as skilled labor in the German labor market, probably owing to the skills acquired through many years of professional experience.

On the whole, however, almost one-third of the refugees carry out work activities in Germany that place lower demands on the skills they have acquired formally or informally than the tasks they have performed on their jobs in their home countries. These differences in the skill requirements in the performed jobs are likely to be due to a set of causes: lack of language graduation from a professional academy or university bachelor's degree), and 4) experts (highly complex activities which require completed university studies of at least four years) (Paulus & Matthes, 2013).
skills, problems of transferring human capital to a labor market with different skills requirements, aspirations towards speedy labor market entry, and targeted recruitment of workers in manual bottleneck occupations.

4.2 Language proficiency and language acquisition

German language proficiency is a core element of the migrants’ successful and sustainable integration into the German labor market and society. Better destination language skills enable immigrants not only to improve their labor market chances and wages (Chiswick, Lee, & Miller, 2005; Dustmann & Fabbri, 2003), but are also essential for societal integration: by reducing language barriers, immigrants can better integrate into society and make contact with locals easier (Martinovic, Van Tubergen, & Maas, 2009). Virtually nobody among the refugee population possessed German language skills upon their arrival (Figure 4-5). Since then, we observe a steady increase in the language proficiency. The share of refugees with self-reported good or very good language skills increased from 12 percent to 41 within three years since arrival in Germany.19

---

19 The self-reported language proficiency of refugees in the survey is highly correlated with the interviewer’s assessment of language command in the interview situation (Brücker et al., 2017).
Figure 4-5: Shares with (very) good German language proficiency and participation rates in integration courses in percent

![Chart with data](chart-image)

*Notes:* To derive German language proficiency, we calculated the rounded mean of self-reported competences in reading, speaking and writing (ranges between 1 “none” and 5 “very good”). (Very) good German language proficiency is coded one if the calculated measure reaches at least a level of four (otherwise coded to zero).


As Figure 4-5 indicates, the improvement of German language proficiency goes hand-in-hand with the growing participation in integration courses. While in the first year after immigration almost one quarter of refugees participated in the integration course, the share increases to two-third of the group that immigrated three years before the interview or earlier.

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20 Integration courses are provided by the BAMF and are the most encompassing integration program which serves nationwide. Integration courses may be comprised of 600 hours (general integration course), 900 hours (special course) or 400 hours (intensive course) of classes, in addition to an orientation course of 100 hours (Scheible & Rother, 2017). Orientation classes provide information on German legal, cultural and historic issues. In most cases, integration courses serve the first opportunity to formally acquire language skills.
Table 4-1: Participation in language courses and language proficiency by participation in percent

<table>
<thead>
<tr>
<th>Language course</th>
<th>Participants</th>
<th>(Very) good German language proficiency</th>
</tr>
</thead>
<tbody>
<tr>
<td>At least one language course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>did not participate</td>
<td>25</td>
<td>12</td>
</tr>
<tr>
<td>participated</td>
<td>75</td>
<td>38</td>
</tr>
<tr>
<td>Integration course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>did not participate</td>
<td>45</td>
<td>20</td>
</tr>
<tr>
<td>participated</td>
<td>55</td>
<td>44</td>
</tr>
<tr>
<td>ESF-BAMF-course/occupational language course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>did not participate</td>
<td>91</td>
<td>30</td>
</tr>
<tr>
<td>Participated</td>
<td>9</td>
<td>59</td>
</tr>
<tr>
<td>BA-program with language support 1)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>did not participate</td>
<td>88</td>
<td>31</td>
</tr>
<tr>
<td>Participated</td>
<td>12</td>
<td>50</td>
</tr>
<tr>
<td>Other language course</td>
<td></td>
<td></td>
</tr>
<tr>
<td>did not participate</td>
<td>50</td>
<td>28</td>
</tr>
<tr>
<td>Participated</td>
<td>50</td>
<td>39</td>
</tr>
</tbody>
</table>

1) This includes participation in an introductory German-language course offered by the BA (according to § 421 SGB III) as well as other BA language programs, the “Perspektiven für Flüchtlinge” measure (BA) (Perspectives for Refugees), “Perspektiven für jugendliche Flüchtlinge” (BA) (Perspectives for Adolescent Refugees), “Perspektiven für weibliche Flüchtlinge,” (BA) (Perspectives for Female Refugees) or “KompAS” (BA and BAMF).

Notes: To derive German language proficiency, we calculated the rounded mean of self-reported competences in reading, speaking and writing (ranges between 1 “none” and 5 “very good”). (Very) good German language proficiency is coded one if the calculated measure reaches at least a level of four (otherwise coded to zero).


Beyond the integration course, there are further language courses that are supported by the state or other non-governmental organizations. In 2017, roughly 75 percent of refugees have visited or completed at least one language course (Table 4-1). In particular, 50 percent had participated or completed an integration course. A further 9 percent of respondents had participated in or completed an advanced language course that also teaches practical work-related vocabulary (the ESF-BAMF language course and the „vocational language courses”). 12 percent of the 2017 respondents had participated in or completed programs of the Federal Employment Agency (BA) with occupation-specific language support. In addition to these nationwide programs, the federal states, local authorities, welfare organizations, volunteers, and other private actors offer numerous language promotion programs which vary greatly in terms of quality, scope, and objective. In 2017 the participation and graduate rate in these other programs was about 50 percent.

With regard to the proportion of refugees with (very) good German language proficiency, there are great differences both between various courses and between participants and non-participants. On average, 38 percent of refugees who visited any language course report (very)
good language skills as opposed to 12 percent who did not. This result holds for a whole set of various programs, with the highest gains from participation in the ESF-BAMF course which provides targeted job-related language skills.

4.3 Discussion

It is hardly surprising that labor market integration of refugees proceeds at a slow rate compared to that of other immigrant groups given the detrimental circumstances of forced migrations and various institutional hurdles hampering economic integration of refugees. Nevertheless, administrative data suggests that 35 percent of the refugees arriving since the beginning of 2015 are in employment by the end of October 2018. This trend is accelerating with the residence stay in Germany. Many refugees in Germany pursue activities that have significantly lower qualification requirements than those they had in their countries of origin, owing inter alia to the lack of the dual vocational system and formal professional certificates. While around 30 percent of the refugees are working jobs for which they are formally over-qualified, a quarter also work in occupations whose demands go beyond their formal qualification level. Obviously, these refugees manage to utilize their qualifications acquired on-the-job at least partially in the German labor market. The average earnings of full-time workers are around 55 per cent of the average earnings of full-time employees in Germany. Furthermore, the progress of German language proficiency over time is evident and strongly correlates with access to language programs. Overall, progress on program participation and integration can be observed over time, although the speed of integration certainly lags behind those of other immigrant groups.
5 Asylum policies

Particularly due to the unsecure legal status during asylum procedures – in which refugees’ access to the labor market is (usually) restricted and uncertainty whether they can remain in the host country is high – successful economic and social integration of refugees is challenging. \(^{21}\) However, not only the legal status per se but also the length of asylum procedure may be detrimental for the social and economic integration of the newly-arrived due to legal insecurity, devaluation of human capital and potential depress in working aspirations during the waiting process. This, in turn, may postpone or even impede the process of integration into the labor market and society of the host country.

To our knowledge, the role of the asylum process for refugees’ integration process has, so far, been hardly empirically studied. While it has been shown that lengthy asylum procedures have a negative effect on the refugees’ employment probability in Switzerland (Hainmueller, Hangartner, & Lawrence, 2016), knowledge on the role of asylum status change – i.e., from being in asylum-procedure to approved or rejected – is scant. We contribute to the previous literature by examining whether and to which extent the length of the asylum procedure in combination with the current legal status affect transition rates to the first job both directly and indirectly through country-specific human capital investments, approached here in terms of transition to the first German language course.

The legal status constitutes the crucial determinant of legal means of access to language learning and the labor market. While approved refugees have unrestricted access to the labor market, considerable legal restrictions exist as long as asylum applications are pending or have been rejected. Asylum-seekers are permitted to work after a blocking period of three months since the asylum application has been lodged, provided they are not from safe countries of origin (sichere Herkunftsländer)\(^{22}\) and their asylum application was made after 31 August 2015.\(^{23}\) Still, obtaining a work permit during the asylum process requires approval from the

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\(^{21}\) This chapter is a modified version of Kosyakova, Yuliya and Brenzel, Hanna (2019). How does the length of asylum procedure and legal status affect the labor market integration of refugees? Evidence from Germany. Working paper.

\(^{22}\) Safe countries of origin comprise EU countries; Ghana, Senegal (until November 2014); Bosnia and Herzegovina, Macedonia, Serbia (since 6 November 2014); Albania, Kosovo Montenegro (since 24 October 2015).

\(^{23}\) Before legislative reforms in 2013 and 2014, the blocking period was even 12 months.
responsible immigration office and a comparability assessment conducted by the Federal Employment Agency (BA).

Regarding access to German language courses, we may distinguish between private and public courses. While participation in private ones is at everyone's disposal and has to be self-financed, public offers are subject to a number of access restrictions. Among the latter, the integration courses of the Federal Office for Migration and Refugees (BAMF) are the most important course-type; roughly half of 2017 surveyed refugees who had already taken part in at least one language program had attended an integration course (see Section 4.3). Another provider of widespread language courses is the Federal Employment Agency (BA; see also section 4.3 and chapter 6). Permission to participate in public courses depends mainly on the legal status. Integration courses are available to those with approved refugee status. Since November 2015, asylum-seekers from countries of origin with “high prospects to remain” (gute Bleibeperspektive; see below)\(^\text{24}\) and those with tolerated status can apply for an integration course at the BAMF.\(^\text{25}\) Similar regulations determine access to other public language programs and the active labor market programs of the Federal Employment Agency.

In view of the expanding number of asylum applications since the fall of 2015 and growing administration burden, German authorities introduced the so-called “integrated refugee management” with the overarching goal to promote refugees’ integration process (Grote, 2018). In order to ease and to speed-up the administration of the asylum procedure, applicants were clustered into four groups according to their countries of origin (Clusterverfahren). The criteria for prioritization in this cluster system were: country of origin (Cluster A: countries of origin with a high protection rate > 50 %; Cluster B: safe country of origin), expected complexity (Cluster C: complex cases), and potential Dublin cases (Cluster D: assessment of whether applicants should be transferred back to other EU states in accordance with the Dublin Agreement). Cluster A applicants – refugees with good prospects to remain – were treated as the highest priority (see BAMF, 2015).\(^\text{26}\)

\(^\text{24}\) Since November 2015 these include Syria, Iraq, Iran, Eritrea, with Somalia since August 2016.

\(^\text{25}\) Those receiving benefits as specified by the Asylum Seeker Benefits Act (AsylbLG) or Social Security Code II (SGB II, unemployment benefits) may be obliged to take part in integration courses.

\(^\text{26}\) The cluster system was effective nationwide from March 2016 until March 2017 (Grote, 2018, p. 53).
5.1 Empirical method

For our empirical analyses, we rely on the IAB-BAMF-SOEP Survey of Refugees, the 2017 data in particular, which includes first-time and panel respondents who were interviewed in the second half of 2017 and in the beginning of 2018. The sample was further constrained to individuals aged between 16 and 64 at the time of their arrival in Germany, meaning that they were (still) fully available to the German labor market. The data was organized as person-month observations to consider dynamics of the changes in the asylum status and length of the individual asylum procedures.

Labor market integration is approached via the transition rate to the first job, which encompasses full- and part-time, marginal and irregular employment as well as vocational training and internships. Investments into German language acquisition is approached via transition to the first language course (see section 4.3, for the list of the surveyed language courses). The period of observation begins in the month and year of application for asylum and either ends in the month and year of the first job entry (of the entry into the first language course for the analyses of first language course entry) or is right-censored at the date of the interview (if the corresponding transition has not yet occurred). This leads to a total of 86,740 person-month observations for the analyses of labor market entry (3,605 person observations) and 53,802 person-month observations for the analyses of language course entry (3,471 person observations).

As estimation method, we employ survival analyses techniques (Blossfeld, Golsch, & Rohwer, 2007). The key statistical concept within survival analyses is the transition rate (i.e., hazard rate), which represents the probability of experiencing an event (the labor market entry or enrollment into the first German language course) in month t given that by the beginning of t, no entry had occurred. Accordingly, a higher transition rate implies both a faster transition as well as a higher (monthly) probability of transition. Our time metric is the number of months since respondents’ application for asylum. We specify duration dependence of the baseline hazard as a Gompertz function, which assumes a monotonically decreasing transition rate to the first job (first language course). The hazard rate is modelled on the selected explanatory factors and the non-observable heterogeneity of individuals (gamma distribution assumption).

Our main explanatory variables are the time-dependent length of the asylum procedure and the time-dependent asylum application status. The length of the asylum procedure increases by one month for each following person-month observation and is fixed in the month and year of the decision date. It continues to grow for those with no decision by the censoring time-point. The
variable for the status of the asylum application is coded as (1) pending, as long as the decision has not (yet) been met, and changes to (2) approved, or (3) rejected in the month of the decision on asylum application.\textsuperscript{27}

The length of the asylum process and the access to integration measures during the asylum procedure may vary by the status of clusters of origin countries (see Section 4.1). In line with the German legal framework, we distinguish between refugees originating from (1) countries with good prospects to remain (Eritrea, Iran, Iraq, Somalia and Syria), (2) safe countries of origin (Albania, Bosnia and Herzegovina, Ghana, Kosovo, Macedonia, Montenegro, Senegal and Serbia), and (3) the remaining countries. For efficiency reasons, this categorical variable is time-constant.

As further confounders, we control for gender, children and their age (both time-dependent), age upon arrival, arrival cohort, pre-migration human capital (such as the highest level of education, German language proficiency and working experience), pre-migration social networks (such as support from family/relatives or from friends/acquaintances living in Germany before arrival), motivational aspects (such as economic reasons for immigration and indicator for having been choosing Germany as a destination country because of Germany’s asylum procedure), time in months between arrival and asylum application, fixed effects for the Federal State of the first arrival, the unemployment rate in the district of arrival fixed in the arrival year, and survey tranche. In the analyses on labor market entry, we account for (time-dependent) enrollment (graduating) status into (from) language courses. We control for (time-dependent) labor market entry in the analyses on language acquisition.

5.2 Results

In the 2017 survey, 80 percent of the asylum applications had been decided. The majority of asylum-seekers – 68 percent – had been approved. In 16 percent of the cases, respectively, asylum applications had been rejected or remained pending. Turning to the asylum procedure lengths, the data implies that the average processing time for a positive decision was around seven months. In turn, it was nearly twice as long for a negative decision (13 months) and lasted for 24 months for applications that had not yet been decided at the time of the interview.

\textsuperscript{27} For the sake of statistical efficiency, we neglect the distinction between different types of approval and rejection because the individual consequences of these different types of approval (or rejection) are relatively similar in terms of access to the German labor market and language courses (see BAMF, 2016).
Table 5-1 disaggregates the results of asylum applications by the country group of origin. With 67 percent, refugees from countries with high prospects to remain comprised the largest group among all refugees in 2017. The proportion of refugees from such countries was significantly higher among asylum-seekers with an approved application, whereas far fewer were found within the group of rejected asylum-seekers and those with pending application. Refugees from safe countries of origin and other countries were more likely to have their applications rejected or the decision still pending.

**Table 5-1: Outcome of asylum application at the time of survey by country group of origin**

<table>
<thead>
<tr>
<th>Country group of origin</th>
<th>Asylum applications</th>
<th>Status of asylum application at the interview time</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Approved</td>
</tr>
<tr>
<td>Countries with a good perspective to remain</td>
<td>67</td>
<td>86</td>
</tr>
<tr>
<td>Safe countries</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>Other countries</td>
<td>31</td>
<td>13</td>
</tr>
<tr>
<td>Total</td>
<td>100</td>
<td>100</td>
</tr>
<tr>
<td>Total observations</td>
<td>3,672</td>
<td>2,851</td>
</tr>
</tbody>
</table>

*Notes: Italicics indicate less than ten observations.*

*Source: Kosyakova and Brenzel (2019) based on the IAB-BAMF-SOEP Survey of Refugees in Germany 2017, own calculations. Design weights are used.*

As illustrated in Figure 5-1, seven months after applying for asylum, nearly half of the asylum applications submitted by refugees from countries with good prospects to remain have been decided upon. This figure contrasts with just 21 percent of refugees from safe countries of origin and 15 percent of those from other countries. Accordingly, refugees from countries with high prospects to remain are not only more likely to be granted protection, they also receive a decision sooner; these patterns conform to the goals of the cluster system described above.

At the time of the survey, more than two thirds of refugees had begun a language course before going into employment, out of which 28 percent were subsequently employed. In contrast, only about one tenth took up gainful employment first, 40 per cent of which subsequently took part in a language course. Only 1 percent are in language courses and work at the same time and 18 percent do neither.

To adequately address the complex relationships between asylum procedure length, its outcomes and integration into the labor market, we apply a multivariate analysis which allows us to model not only time-dependent variables but also to account for certain observed characteristics of the refugees, the regional labor market situation and the non-observable heterogeneity of individuals. These results for the transition into first employment (Model 1) and the transition to the first German language course (Model 2) are presented in Table 4-2.
We find that longer asylum procedures significantly reduce the hazard rate of transition into the first job (Model 1): A six months increase in duration reduces the transition rate into initial employment by 11 percent (= 0.98⁶ - 1). The (time-dependent) status of the asylum request seem also to be a significant predictor for the timing of the first job entry: refugees with an approved asylum status have a 27 percent (= 1.27 - 1) higher transition rate to the first job than those whose applications were rejected or are still pending.

We further observe a higher transition rate into first-time employment of refugees from safe countries of origin (followed by those from ‘other’ countries) relative to those from countries with good prospects to remain. The refugees from safe countries of origin face a much higher risk to be rejected (BAMF, 2016). Accordingly, they might be more motivated to seek employment in order to prevent deportation to the country of origin by obtaining a long-term residence permit The German Residence Act offers this possibility for tolerated persons if they
make their own living and have been living in Germany for eight years. Another possible explanation is that they want to earn as much income as possible during their remaining time in Germany.

Table 5-2 Regression results: transition into first employment and first language course, relative hazard ratio

|                                          | Transition into… |          |          |
|                                          | first job        | first language course |
|                                          | Model 1          | Model 2   |          |
| **Duration (in months) of asylum procedure** | 0.98***          | 0.98***   |          |
| Outcome of asylum application (Ref.: Pending) |          |          |          |
| Approved                                  | 1.27**          | 1.75***   |          |
| Rejected 1)                               | 0.96            | 1.77***   |          |
| Country group of origin (ref.: Good perspectives to remain) | 3.82***          | 0.61*     |          |
| Safe countries of origin                  | 1.40***          | 0.93      |          |
| Other countries of origin                 | 0.61*           | 1.75***   |          |
| Language course in Germany (ref.: Not (yet) enrolled) | 0.81*           | 1.98***   |          |
| Currently enrolled                        | 1.19            | 0.67***   |          |
| Course completed                          | 1.19            | 0.67***   |          |
| Previous course completed and enrolled in the next course | 1.19            |          |          |
| Entered first job                         | 0.67***         |          |          |

**Model Fit**

<table>
<thead>
<tr>
<th></th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Log Likelihood</td>
<td>-1,574</td>
<td>-3,850</td>
</tr>
<tr>
<td>( \chi^2 )</td>
<td>707</td>
<td>746</td>
</tr>
<tr>
<td>Degrees of Freedom</td>
<td>62</td>
<td>59</td>
</tr>
<tr>
<td>Akaike Information Criterion</td>
<td>3,277</td>
<td>7,824</td>
</tr>
<tr>
<td>Bayesian Information Criterion</td>
<td>3,886</td>
<td>8,376</td>
</tr>
<tr>
<td>LR test of ( \theta = 0 )</td>
<td>6.05***</td>
<td>13.91***</td>
</tr>
<tr>
<td>Control variables 2)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Unobserved heterogeneity 3)</td>
<td>Yes</td>
<td>Yes</td>
</tr>
<tr>
<td>Person-month observations</td>
<td>86,740</td>
<td>53,802</td>
</tr>
<tr>
<td>Observations</td>
<td>3,605</td>
<td>3,471</td>
</tr>
<tr>
<td>Failure</td>
<td>757</td>
<td>2617</td>
</tr>
</tbody>
</table>

Notes: Significance level *** \( p < 0.001 \), ** \( p < 0.01 \), * \( p < 0.05 \) (two-tailed test). 1) Only applicants with a tolerated status were considered for employment, whereas enrolment in a first language course included also those requested to leave Germany immediately. 2) Control variables are listed in Section 4.2. 3) Gamma-distributed frailty models were used to model unobserved heterogeneity.


The results also confirm that language course enrolment is initially negatively correlated with integration into the labor market: the rate of transition to a first job for refugees who enroll in language courses is slightly lower than for those who do not. However, rates of transition to employment become twice as high once refugees have completed a language course.

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28 The draft Act for Skilled Labor Immigration, which is currently in the legislative process, includes new employment- and apprenticeship-related tolerations for people who have been in employment (subject to social security contributions) for at least 18 months or have begun an apprenticeship.
For transition into the first language course, we also observe a negative correlation with duration in the asylum procedure (Model 2). Both asylum approval and rejection lead to faster enrolment – indicating that the crucial factor is rather any decision at all than the asylum outcome itself. Compared to refugees from countries with a high prospects to remain, those from safe countries of origin have an almost 39 percent lower transition rate. Finally, being employed delays enrolment in a first language course, which could be related to limited time availability and increased opportunity costs among employed refugees.

5.3 Discussion

Our results show a statistically significant negative relationship between asylum procedure length and transition to a first job. A similar relationship is observed for enrolment in a first language course. Approval of the asylum application accelerates entry into the labor market, while a completed asylum process (even when the decision is negative) promotes enrolment in the first language course. Clear perspectives on one’s own legal status and corresponding residence permit (even with a shorter-run perspective) seem to be more decisive for investment into host country language acquisition than for labor market entry. We further observe that refugees from safe countries of origin enter their first employment sooner than refugees from countries with high perspectives to remain or other countries – the two latter groups seem to enter the labor market generally later and prioritize learning German language first. Eventually, refugees who lack or have only slim staying perspectives are more motivated to take up work, either in order to improve their chances to stay in Germany or to use the time left to earn money. In turn, refugees who prioritize investing into host country language – although delay their labor market entry at the first glance – factually improve their chances for successful and sustainable economic integration, since completion of a German course doubles the transition rate to the first job.

At this stage, we are able to conclude that the refugees’ legal status is highly important for their economic integration, whereas protracted asylum procedures influence the integration process negatively. Hence, efforts should continue to ensure that asylum procedures are efficient and fast, so that applicants can gain legal certainty as soon as possible.
6 Dispersal policies

Among employment bans for asylum-seekers (Marbach, Hainmueller, & Hangartner, 2018), the outcome and length of asylum procedures (chapter 5) and host-country language acquisition (chapter 7), the spatial distribution of refugees and legal mobility restrictions are an essential aspect of integration policies. Concerns about the capacity of local labor markets to integrate large groups of refugees, displacement effects on housing markets and the concentration of immigrants in ethnic ‘ghettos’ are widespread in Germany and other host countries (Fasani, Frattini, & Minale, 2018; Kürschner & Kvasnicka, 2018; Lastrapes & Lebesmuehlbacher, 2016).

With the Integration Act from August 2016 the German legislature has introduced a residency obligation for approved refugees and asylum-seekers under subsidiary protection (§12a, Residence Act) tempting to prevent mobility and co-ethnic concentration. While this group has essentially unrestricted access to the labor market, the policy constitutes a wide-ranging intervention in the free of movement of individuals. They are obliged to take residence in the federal state (Bundesland) in which their asylum application was processed for further three years after approval. In six out of 16 federal states the implementation is more restrictive so that refugees are even obliged to take their place of residence within an assigned district (Kreis) to which they are assigned by the local foreigners’ office. In most cases, this coincides with the region in which their asylum application was processed. Consequently, the residency obligation prolongs the initial distribution of asylum-seekers – which follows the Königsteiner Schlüssel as the central dispersal scheme in Germany – for a substantial time period even after the approval of asylum applications.

Residency obligations may shape labor market integration inter alia through three main mechanisms (see, e.g., Edin, Fredriksson, & Åslund, 2003): First, at the micro level, they may

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29 This chapter is a modified version of Jaschke, Philipp and Brücker, Herbert (2019). The residency obligation for approved refugees and its effects on labor market integration: Quasi-experimental evidence from Germany. Working Paper.

30 Exceptions apply for employees subject to social security contributions with at least 15 weekly working hours and monthly income of approximately 700 €.

31 The Königsteiner Schlüssel is the pivotal dispersal policy in Germany according to which newly arrived asylum-seekers are distributed across federal states according to an annually updated quota based on tax revenue and population numbers. Within the federal states, similar, but state-specific, allocation keys are applied.
increase search costs and reduce matching efficiency by restricting individual mobility. Second, they may reinforce and perpetuate spatial mismatch if the initial dispersal of refugees has been inefficient (Åslund, Öst, & Zenou, 2010; Åslund & Rooth, 2007; Gobillon, Selod, & Zenou, 2007; Kain, 1968). Third, they may reduce the spatial concentration and clustering of refugees, which may have ambiguous effects: one the one hand, co-ethnic network might provide valuable resources and reduce, e.g., reduce information asymmetries via job referrals and thus increase chances for labor market integration (e.g., Damm, 2009; Dustmann, Glitz, Schönberg, & Brücker, 2016), while, on the other hand, human capital externalities (Chiswick & Miller, 2002; Cutler & Glaeser, 1997) and reduced incentives to acquire host country specific human capital such as language skills may have detrimental impacts on labor market integration. Several studies have exploited exogenous variation in the immigrant share induced by similar dispersal policies for identifying of the impact of co-ethnic networks and the consequences of administrative dispersal policies on labor market outcomes (see Damm, 2009 for Denmark; Edin, Fredriksson, & Åslund, 2004 for Sweden; Fasani et al., 2018 for the European level). In this chapter, we examine, first, the overall effects of the residency obligation for approved refugees on the transition rate to the first job and, second, take the role of spatial mismatch into focus.

6.1 Empirical Method

For the identification of the effects of the residency obligation we exploit the exogenous, quasi-experimental variation of placement policies across both space and time in Germany. The Immigration Act from 2016 delegates the application of the residency obligation to the authorities at the Federal State level. While mobility across the boundaries of the 16 Federal States was generally restricted, it remained the decision of the Federal States to impose further mobility restrictions at the much smaller district (county) level. In six out of 16 Federal States the residence is implemented in a way that refugees are restricted to reside within districts, sometimes even within municipalities – typically the location where their asylum application was approved. This delivers a considerable regional variance in the treatment of approved asylum-seekers. Regarding the time dimension, the federal law became effective in August 2016; however, in states which enforce the residency obligation at the district or municipal level the implementation took place at different points in time.

Accordingly, we define our treatment group as approved asylum-seekers if they, first, received their approval in one of the six treatment states and, second, their approval occurred after the residence obligation at the district or municipal level has become effective in the federal state
of residence. Table 6-1 provides an overview of the division into our treatment and control group.

### Table 6-1 Treatment and control group – region and date of asylum approval

<table>
<thead>
<tr>
<th>Federal State of asylum approval</th>
<th>Date of approval</th>
<th>Treatment-/ Control-Group</th>
</tr>
</thead>
<tbody>
<tr>
<td>North Rhine-Westphalia</td>
<td>November-2016 or later</td>
<td>Treatment</td>
</tr>
<tr>
<td></td>
<td>October-2016 or earlier</td>
<td>Control</td>
</tr>
<tr>
<td>Hesse</td>
<td>September-2017 or later</td>
<td>Treatment</td>
</tr>
<tr>
<td></td>
<td>August-2017 or earlier</td>
<td>Control</td>
</tr>
<tr>
<td>Baden-Wuerttemberg</td>
<td>September-2016 or later</td>
<td>Treatment</td>
</tr>
<tr>
<td>Bavaria</td>
<td>August-2016 or earlier</td>
<td>Control</td>
</tr>
<tr>
<td>Saarland</td>
<td>February-2017 or later</td>
<td>Treatment</td>
</tr>
<tr>
<td>Saxony-Anhalt</td>
<td>January-2017 or earlier</td>
<td>Control</td>
</tr>
<tr>
<td>All others</td>
<td>All</td>
<td>Control</td>
</tr>
</tbody>
</table>

1) The residency obligation may be imposed retrospectively on refugees up to six months after their approval.


It has to be noted that the law entails a retrospective period in which residency obligations may be imposed retrospectively up to six months after approval of the asylum claim. For this reason, we count persons who have received their approval in treatment states up to six months before the reform has become effective to the treatment group.

We restrict the sample to individuals who turn out to be approved by the interview date – carried out between June 2017 and March 2018 – and have been approved in or later than January 2015. Taken together this yields a control group comprising 1,148 individuals and a treatment group of 1,816 individuals.

In our analysis we are – analogous to the preceding chapter – interested in the impact of the residency obligation on the individual chances to find her or his first job in Germany. The dependent variable is thus a monthly dummy indicating whether a person has found a first job (incl. internships) or not. For the identification of the effects we conduct individual-level (semi-parametric) duration analyses. An advantage of such models lies in incorporating information on subjects of analysis, which have not (yet) entered employment from non-employment and are, thus, right-censored at the time of the interview. Even though the survey data is only available for two waves, we create a “pseudo-monthly-panel” structure. For each individual we arrange the data from the months of arrival to Germany until either the month of being employed for the first time in Germany or – if not employed – the month of the interview (censored).

We estimate the following baseline specification for the hazard-rate $h$ of a transition into the first job for individual $i$ in month $T$, 

$$h(T) = \frac{f(T)}{S(T)}$$

where $f(T)$ is the number of transitions at time $T$ and $S(T)$ is the number of individuals at risk at time $T$. 

52
\[ h(y_{i,j,k,T}) = f(\alpha X_{i,j,k,T} + \beta \times R_{i,j,k,T} + A_{i,j} + \delta_j + \delta_k + \delta_{y,T} + \delta_{q,T} | T \geq t), \]

where the dependent variable \( y_{i,j,k,T} \) is a dummy for the transition into the first job of individual \( i \) residing in federal state \( j \) in labor market region \( k \) at time \( T \), \( X_{i,j,k,T} \) a vector of individual characteristics and other confounders at the state and regional level, \( R_{i,j,k,T} \) a dummy variable which has a value of one if the residence obligation is effective for individual \( i \) and of zero if not, \( A_{i,j} \) a vector of dummies indicating whether an individual \( i \) in federal state \( j \) was approved before or after the reform dates \( 33 \), \( \delta_j \) a vector of time-constant dummies for the federal state, \( \delta_k \) a time-constant vector of dummies for the (functional) labor market region, \( \delta_{y,T} \) and \( \delta_{q,T} \) vectors of year- and quarter fixed effects, respectively. Thus, our parameter of interest \( \beta \) measures the time- and regional varying impact of the residence obligation on the probability of a transition into first employment.

Our time metric is the number of months since respondents’ arrival to Germany. We specify duration dependence of the baseline hazard as a Weibull function, \( 34 \) which assumes a monotonically increasing transition rate to the first job. The hazard rate is modelled on the selected explanatory factors. The definition of functional labor market regions follows Eckey, Kosfeld, Türck (2006) and Kosfeld and Werner (2012). Basically, the rationale behind the concept of functional regional labor markets is to rule out biases in estimations that exploit regional variation since administrative spatial units – such as districts – are non-independent in terms of spatial spillovers through, for example, commuting behavior (Eckey et al., 2006; Kosfeld & Werner, 2012). Because functional labor markets do not coincide with the borders of the federal states, we also control for the federal state of approval. Finally, the year and quarterly time fixed effects capture macro- and seasonal factors influencing the employment outcome variable.

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32 Note that the variable \( R_{i,j,k,T} \) includes the individual subscript \( i \) because individuals not necessarily fall under the provisions of the residency obligation even if \( T \) lies after the implementation in federal state \( j \). This occurs due to (i) individuals that are not approved at time \( T \) and (ii) the retrospective period of the reform.

33 These include the reform dates from Table 6-1 and, additionally, August-2016 as the month in which the Federal law has become effective nationwide.

34 We also tested other shapes for the baseline hazard, including a Cox-model, the (more flexible) log-logistic proportional hazards model and a three months piecewise constant exponential model. While the results stay qualitatively unchanged, the Weibull model offers the superior model fit.
In addition, we control for a variety of district-specific labor market characteristics such as labor market tightness (the ratio of vacancies to unemployed), the degree of urbanization (3 categories) and the percentage share of population with nationality of the top asylum origin countries in the population. At the individual level, we further control for age, age squared, gender, children in household, nationality, education before arrival to Germany, German language proficiency at arrival, time-dependent participation in any language course, years of employment before migration, type of first accommodation in Germany, health satisfaction before migration, risk preferences, months since arrival to Germany (baseline hazard) and (time-dependent) information on months since asylum application.

6.2 Results

Table 6-2 displays the estimation results. Hazard-ratios of the Weibull model are reported. On average – everything else constant – refugees who are subject to a residency obligation have (significant at the 5 percent level) an approximately 28.5 percent lower rate of transition into employment compared to individuals who are not (Model 1). To classify the order of magnitude: The employment rate of those approved after or in August 2016 – after the integration act has become effective – is 19 percent.

Following the spatial mismatch concept, we may expect that approved refugees suffer from the residency obligation particularly if this prevents the attachment to regions with prospering labor markets, e.g. in terms of available job-offers (Davis & Weber, 2002). We add interaction terms between our treatment variable and three proxies for spatial mismatch at the district level (where the asylum application was approved): First, for the unemployment rate we define three categories based on percentiles (below the 20th, between the 20th and the 80th, above the 80th percentile). Second, we use labor market tightness as a proxy for labor demand – calculated as the ratio of vacancies to unemployed job-seekers – categorized into below or above the 80th percentile. Third, in accordance with the German Federal Institute for Research on Building, Urban Affairs and Spatial Development (BBSR) – which classifies district types by the degree of urbanization based on the resident population density – we divide the districts where asylum-seekers have received the approval of their applications into those with a population density below the 50th and above the 50th percentile. All variables are calculated relative to districts within the same federal state in order to account for heterogeneity that simply arises from differences (e.g., in macroeconomic factors) across federal states.
Table 6-2: Estimation results for transition into first employment

Results are reported as hazard rates

<table>
<thead>
<tr>
<th>Model</th>
<th>(1) Weibull</th>
<th>(2) Weibull</th>
<th>(3) Weibull</th>
<th>(4) Weibull</th>
</tr>
</thead>
<tbody>
<tr>
<td>Treated: Approved in treatment state after reform or up to 6 months before</td>
<td>0.715&quot;</td>
<td>1.046</td>
<td>0.636&quot;</td>
<td>0.560***</td>
</tr>
<tr>
<td></td>
<td>(-2.07)</td>
<td>(0.17)</td>
<td>(-2.46)</td>
<td>(-2.66)</td>
</tr>
<tr>
<td>Approved</td>
<td>1.080</td>
<td>1.065</td>
<td>1.121</td>
<td>1.079</td>
</tr>
<tr>
<td></td>
<td>(0.41)</td>
<td>(0.34)</td>
<td>(0.60)</td>
<td>(0.41)</td>
</tr>
</tbody>
</table>

Local unemployment rate (Ref: < 20th percentile)

| | 20th – 80th percentile | > 80th percentile |
| | 0.790 | 0.720 |
| | (-1.22) | (-1.09) |
| Treatment × (20th – 80th percentile) | 0.686 | |
| | (-1.26) | |
| Treatment × (> 80th percentile) | 0.403" | |
| | (-1.98) | |

Local labor market tightness (Ref: ≤ 80th percentile)

| | > 80th percentile |
| | 1.035 |
| | (-0.21) |
| Treatment × (LM – Tightness > 80th percentile) | 1.536 |
| | (1.40) |

Local population size (Ref: ≤ 50th percentile)

| | > 50th percentile |
| | 1.044 |
| | (0.28) |
| Treatment × (Pop. > 50th percentile) | 1.658" |
| | (1.82) |

Person-months observations | 66,102 | 66,102 | 66,102 | 66,102 |
Person observations | 2,964 | 2,964 | 2,964 | 2,964 |
Controls | Yes | Yes | Yes | Yes |
Time of approval dummies: After 08-2016, 09-2016, 11-2016, 02-2017, 09-2017 | Yes | Yes | Yes | Yes |
Regional functional labor market dummies | Yes | Yes | Yes | Yes |
Federal State dummies | Yes | Yes | Yes | Yes |
Year & Quarter dummies | Yes | Yes | Yes | Yes |

Notes: * p < 0.10, ** p < 0.05, *** p < 0.01; t statistics in parentheses. Sample includes persons whose asylum application was approved between January 2015 and the time of the interview. Control variables are listed in Section 5.2. Time of approval dummies correspond to the dates of the implementation of the restrictive residency obligation in the six treatment states plus August-2016 (date of Federal law becoming effective).


Columns 2-4 show the results for separate inclusion of interactions. While the residency obligation does not have a negative impact on the hazard-rate of refugees that were approved in districts with an unemployment-rate below the 20th percentile and between the 20th and 80th percentile, we find negative effects for treated individuals in districts with an unemployment-rate above the 80th percentile (Model 2). Moreover, treated refugees in districts with low labor market tightness (labor demand, Model 3) and small population size (Model 4) are
disadvantaged compared to the control group with a free choice of residence. Finally, treated individuals are better off if they reside in districts with a high population density.

6.3 Discussion

Taken together, these results provide evidence for harmful effects of the residency obligation in particular for refugees who reside in regions with unfavorable labor market conditions in terms of overall size, job-availability, labor demand and unemployment. We suggest that refugees who are not affected by the residency obligation exercise their right to move into urban spaces after approval in order to benefit from the better labor market opportunities there. These results may be traced back to different causes: lower unemployment rates there, gains from the agglomeration and diversification of economic activity in and around urban centers (Partridge & Rickman, 2008) and access to the social networks which accrue mostly in cities with a sufficient concentration of individuals and co-ethnic groups. Generally, our results are consistent with other empirical findings, in particular those of the seminal studies by Edin et al. (2003) for Sweden and Damm (2009) for Denmark.

We are confident about the validity of our results because the research design resembles a quasi-experiment, which allows us to circumvent typical endogeneity problems often associated with similar studies. First, the definition of the at-risk sample for our estimations excludes (by definition) employed individuals so that concerns about reverse causality are ruled out. Second, anticipation effects should not bias our results because we exploit the (exogenous) nature of the dispersal policy which eliminates endogenous sorting of individuals along regions. Moreover, the date of approval determines whether individuals are treated, hence the date of application for asylum does not play a role. In fact, media coverage on the new law was low before the first draft of the Integration Act was adopted among coalition parties at the end of May 2016. Strategic considerations concerning the choice of the time of application for asylum can be largely excluded, particularly given the long processing times of asylum applications – partly more than a year – at that time.
7 Health policies

The access to health care may be essential for the well-being of refugees and their integration prospects in host countries. Many refugees have experienced armed conflicts, other forms of violence, persecution and maltreatment which may have affected themselves or close family members and friends. Moreover, many refugees have faced life-threatening events during their flight process such as shipwrecking and physical violence. These factors together with substandard living conditions in host countries are likely to have severe consequences for the health status of refugees (Robjant, Hassan, & Katona, 2009). The findings of the IAB-BAMF-SOEP-survey do indeed find a disproportionately high incidence of psychological and physical diseases particularly among the female refugee population compared to the native population in Germany (Brücker et al., 2019).

Against this background, a restricted access to healthcare services may not only deteriorate the health status of refugees, but also have adverse economic and societal consequences for the host country (Chatterji, Alegria, & Takeuchi, 2011; Frijters, Johnston, & Shields, 2014; Steptoe, Deaton, & Stone, 2015). Nevertheless, there are several limitations in the access to health care services for asylum-seekers in Germany: As long as their asylum application is not yet approved or their duration of stay does not exceed 15 months, asylum-seekers who require medical treatment have to submit their claims either to the local authority for foreigners or the social assistance authority. The decision on the medical treatment claims is undertaken usually by regular employees of the local administration without specific medical training. In many cases a medical treatment requires therefore a consultation with the local health authority beforehand, which may take a few months in the worst-case scenario. Such policy constellations are neither unique for Germany (e.g., Norredam, Mygind, & Krasnik, 2006; Silove, Steel, McGorry, & Drobny, 1999) nor for the specific group under scrutiny – in the US, for instance, undocumented migrants face a lot of barriers in accessing health services (Kullgren, 2003).

In this chapter, we address the important issue of whether granting an (earlier) access to the healthcare system has a positive effect on the health status of recently arrived refugees. Our analysis is based on a recent policy change in Germany which modified the existing rules for the access to healthcare by introducing an electronic healthcare card (eHC). The eHC allows an...

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35 This chapter is a modified and extended version of Jaschke, Philipp and Kosyakova, Yuliya (2019). Does facilitated access to health system improves physical and psychological health outcomes? Evidence from quasi-experiment. IAB Discussion Paper. 2019 (7). Nuernberg: IAB.
immediate, almost unrestricted access to the healthcare system directly after the asylum-seekers’ registration in Germany. The implementation of these healthcare policies is, however, subject to decisions of regional authorities and was adopted only in few Federal states and municipalities and to different points in time. This implies that we observe a pronounced regional and temporal variance of the access to healthcare. Since asylum-seekers are exogenously allocated to their first place of residence, we are able to control for potential problems of anticipated behavior and regional self-selection. This institutional setting provides ideal conditions for the investigation of this important policy change in Germany and the identification of the causal effects of being eligible to healthcare via the permission of the eHC affects the health outcomes of asylum-seekers in Germany. In particular, it could be hypothesized that asylum-seekers assigned to the regions with an immediate access to the healthcare system via an eHC (treated) show better health outcomes as compared to asylum-seekers residing in regions with restricted access to the healthcare system (control).

7.1 Empirical method

Our analysis is again based in the IAB-BAMF-SOEP Survey of refugees. This database is particularly suitable for the purposes of this chapter since it surveyed inter alia a variety of health-related questions allowing us to examine a full spectrum of health outcomes that are highly relevant in the context of humanitarian migration. In particular, we refer to the following health indicators: (1) a physical component summary scale (PCS), (2) a mental component summary scale (MCS), (3) symptoms of depressive illness and anxiety (PHQ-4), (4) refugee health screener (RHS-13).

The sum scales for PCS (range: 11 to 77) and MCS (range: 6 to 73) are derived based on a series of questions related to self-reported assessments on symptoms covering the physical and mental aspects of health-related quality of life (Andersen, Mühlbach, Nübling, Schupp, & Wagner, 2007). The values were z-transformed such that 50 corresponds to the average value in the 2004 German population; ten points correspond to a standard deviation. The PHQ-4 (range: zero to 12) is a four item measure of depression and anxiety (Löwe et al., 2010). The threshold of six and nine designate “yellow” and “red” flags for the presence of a depressive or

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36 A common concern in the literature exploiting the regional variation of reforms for identification of the causal effect of the policy change is, inter alia, potential anticipatory behavior (Alpert, 2016) and, hence, endogenous choice of locality. We address the issue of regional (self-)selection by relying on a quasi-experimental design based on German dispersal policies (see the previously mentioned Königsteiner Schlüssel).
an anxiety disorder. The RHS-13 (range: zero to 52) measures the degree of emotional distress, in particular the anxiety, depression, and posttraumatic stress disorder among refugees (Hollifield et al., 2013). The threshold of twelve or more designate the increased risk of a posttraumatic stress disorder.

We define the treatment group in terms of having access to the healthcare system as a consequence of the policy intervention as outlined above, i.e. being qualified for an eHC via policy change.37 Belonging to the treatment or control group depends on four factors: assigned residence place, date of policy introduction (if at all in the region), length of stay and date of asylum application.

In the first 15 months of their stay in Germany, asylum-seekers receive benefits according to the Asylum Seekers Benefits Act (Asylbewerberleistungsgesetz). This Act restricts the utilization of health services to the basic provisions as previously outlined. Upon approval of the asylum application or after 15 months duration of stay, asylum-seekers (including tolerated individuals) receive the eHC in all locations and for the total period under observation. Hence, the respondents in our sample may be qualified for the eHC not only via the policy change, but also as a result of the asylum application approval or duration of stay. To address potential heterogeneity within the control group, we consider the following categorization for our explanatory variable: (1) eligibility to the eHC via policy change (treatment), (2) eligibility to the eHC via approval status (control), (3) eligibility to the eHC via duration of stay (control), and (4) not eligible to the eHC (control). More specifically, we code for each individual the first access path.

We apply log specifications of our dependent outcome variables to take into account potential non-linear relationships between the explanatory and dependent variables. The equation is estimated with cross-sectional ordinary least squares (OLS) with robust standard errors.38 Although the quasi-experimental research design ensures that the lack of information on confounders is randomly distributed across regions since asylum-seekers’ regional allocation is exogenously driven – i.e. assignment to treatment and control is exogenous – we control for

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37 Since we do not have factual information whether an individual possesses the eHC or not, our analysis resembles an Intention-to-Treat Framework (Gupta, 2011).

38 The chosen health measurements were surveyed only at one time point. The indicators for the PCS and the MCS were surveyed by the first-time respondents in 2016 and 2017. The indicators for the PHQ-4 were surveyed by the first-time respondents in 2016. The indicators for the RHS-13 were surveyed by the panel respondents in 2017.
observables that are potentially correlated to health outcomes. In particular, we control for gender, age and age squared, partners’ residence place, duration of stay, living in reception centers or communal accommodations, German language proficiency, educational attainment and work experience before arrival to Germany, health satisfaction before migration, traumatic experiences during the flight process, respondent type and the survey year. We further include fixed effects for country of origin and for the district of assignment.

7.2 Results

While only 11 percent of asylum-seekers were eligible to the eHC via the policy change (treatment), more than 70 percent were granted full access to the healthcare system either via their status approval or via residence length in Germany (see Table 8-1). In turn, 13 percent were not eligible to the eHC – i.e., those assigned to the district without reform (or in which the reform was not yet implemented) and no or a negative decision on the asylum application and duration of stay that does not exceed 15 months by the interview date.

Table 7-1: Eligibility to the eHC and health outcomes of refugees

<table>
<thead>
<tr>
<th>Eligibility to the eHC</th>
<th>All</th>
<th>Via policy change</th>
<th>Via status approval</th>
<th>Via duration of stay</th>
<th>Not eligible</th>
<th>N</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (row percentage)</td>
<td>100</td>
<td>11.24</td>
<td>41.58</td>
<td>34.04</td>
<td>13.14</td>
<td>7,384</td>
</tr>
</tbody>
</table>

Health outcomes

<table>
<thead>
<tr>
<th>Health outcomes</th>
<th>PCS</th>
<th>MCS</th>
<th>PHQ-4</th>
<th>RHS-13</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>55.02</td>
<td>46.88</td>
<td>3.41</td>
<td>10.26</td>
</tr>
<tr>
<td></td>
<td>56.19</td>
<td>46.11</td>
<td>3.55</td>
<td>9.14</td>
</tr>
<tr>
<td></td>
<td>54.81</td>
<td>48.17</td>
<td>2.98</td>
<td>9.15</td>
</tr>
<tr>
<td></td>
<td>54.78</td>
<td>46.94</td>
<td>3.40</td>
<td>11.83</td>
</tr>
<tr>
<td></td>
<td>55.10</td>
<td>44.59</td>
<td>4.00</td>
<td>-</td>
</tr>
<tr>
<td></td>
<td>5,807</td>
<td>5,807</td>
<td>3,086</td>
<td>1,805</td>
</tr>
</tbody>
</table>

1) The RHS-13 variable is only available for repeated respondents interviewed in 2017 – who have correspondingly longer duration of stay. Consequently, the whole group is granted access to eHC in one way or the other such that the cell for “not eligible” remains empty.


How do the respective differences in the eHC eligibility relate to the health risks of asylum-seekers? Table 8-1 addresses this question and provides first descriptive evidence with mean health scores disaggregated depending on the type of access to the health system.

On average, individuals that qualify for the eHC as a consequence of the reform, have at least one point higher physical health (PCS) compared to those eligible to the eHC via status approval or duration of stay; they are also slightly better off than asylum-seekers not eligible to the eHC at all. Asylum-seekers eligible to the eHC via status approval, have the highest mental health
status (MCS), followed by asylum-seekers eligible to the eHC via duration of stay, by those eligible via policy change, and by those not eligible to the eHC. We observe increased risks of depression and anxiety (PHQ-4) among asylum-seekers non-eligible to the eHC; the differences in the PHQ-4 within asylum-seekers eligible to the eHC in one way or another are negligible. Finally, asylum-seekers eligible to the eHC via reform or status approval indicate lower risks of emotional distress (RHS-13) compared to those that qualify for obtaining the eHC via duration of stay. Overall, the descriptive evidence presented so far provides the first support for the relevance of granting unrestricted access to the healthcare system in one way or another.

Table 8-2 summarizes the estimation results from the multivariate regressions of the PCS, MCS, PHQ-4 and RHS-13 on the eligibility to the eHC and a whole set of explanatory variables. As already shown in the descriptive analyses, we do not find that eligibility to the eHC via policy change has any statistically significant effect on the physical health (PCS) compared to asylum-seekers non-eligible to the eHC at all. Further examination of group differences reveals that asylum-seekers who have by any means access to eHC (i.e., via status approval or via duration of stay) do not show better physical wellbeing than those with no access (these results were tested by changing the reference category).

In turn, asylum-seekers eligible for the eHC via the policy change indicate 7 percent higher mental health (MCS) scores compared to the noneligible asylum-seekers. Although the treatment group also seems to have higher MSC scores than do asylum-seekers eligible for the eHC via approval or duration of stay, the differences are not statistically significant. Hence, we may infer that eligibility for the eHC generally improves asylum-seekers’ mental well-being.

The results for depression symptoms and anxiety (PHQ-4) show no significant differences between asylum-seekers eligible for the eHC via policy change compared to other groups. On the other hand, asylum-seekers with eHC access due to status approval have 13 percent lower PHQ 4 scores than those who are not eligible at all (these results were tested by changing the reference category). Perhaps it is not access to the healthcare system per se but rather more secure prospects of staying in Germany owing to approved status that make one feel less depressed and anxious.

Other than for health outcomes above, we find a noticeable and significant effect of having access to the healthcare system as a consequence of the policy change on emotional distress (RHS-13): asylum-seekers eligible to the eHC via policy change bear 37 percent lower RHS-13 score than those eligible via status approval and 31 percent lower RHS-13 score than those eligible after expiry of the waiting period. As pointed out, the RHS-13 variable is only available
for respondents that were interviewed for the second time in 2017 and have a correspondingly rather long duration of stay so that the whole group is granted access to eHC in one way or the other. In this context, those eligible to the eHC via policy change gain earlier access to the healthcare system compared to those eligible via status approval or duration of stay. Hence, provision of early, easily surmountable and unbureaucratic access to healthcare services as implemented by the eHC apparently has considerable positive effects on the emotional distress.

Table 7-2: Multivariate Regressions of PCS, MCS, PHQ-4 and RHS-13

<table>
<thead>
<tr>
<th>Dependent variable</th>
<th>ln(PCS) Coef. (SE)</th>
<th>ln(MCS) Coef. (SE)</th>
<th>ln(PHQ-4) Coef. (SE)</th>
<th>ln(RHS-13) Coef. (SE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Eligibility to eHC (Ref. via policy change)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Via status approval</td>
<td>-0.00 (0.02)</td>
<td>-0.03 (0.02)</td>
<td>-0.06 (0.07)</td>
<td>0.37*** (0.13)</td>
</tr>
<tr>
<td>Via duration of stay</td>
<td>-0.01 (0.02)</td>
<td>-0.04 (0.02)</td>
<td>0.08 (0.08)</td>
<td>0.31** (0.14)</td>
</tr>
<tr>
<td>Non-eligible</td>
<td>0.00 (0.02)</td>
<td>-0.07** (0.02)</td>
<td>0.07 (0.08)</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>4.02*** (0.10)</td>
<td>3.87*** (0.11)</td>
<td>0.88** (0.35)</td>
<td>1.06 (1.06)</td>
</tr>
<tr>
<td>Citizenship fixed effects</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>District of 1st residence fixed effects</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Controls</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
<td>YES</td>
</tr>
<tr>
<td>Observations</td>
<td>5,087</td>
<td>5,087</td>
<td>3,086</td>
<td>1,805</td>
</tr>
<tr>
<td>Adjusted R²</td>
<td>0.26</td>
<td>0.09</td>
<td>0.12</td>
<td>0.20</td>
</tr>
</tbody>
</table>

Notes: * p < 0.10, ** p < 0.05, *** p < 0.01

7.3 Discussion

In this chapter, we questioned whether an (earlier) access to the healthcare system enhances the health status of recently arrived refugees in Germany. Our analyses do not provide unequivocal conclusions. On the one hand, we find no significant differences in terms of physical health (PCS) between refugees with general access to the health system (via policy change, status approval or duration of stay) and those with no general access to the health system. On the other hand, we do find some evidence that the (earlier) health system access may improve psychological health outcomes. First, refugees with general access to the health system (via policy change, status approval or duration of stay) show higher mental well-being scores (MCS) compared to those with no general access to the health system. Second, access to the health system via status approval results in lower depression symptoms and anxiety (PHQ-4). Third, we find significant health improvements in terms of a lower risk of emotional distress (RHS-13) if early general access to the health system – i.e. in the first 15 months of stay – is provided.
The used measures for PCS, MCS and PHQ-4 are based on rather general questions and can be regarded to some extent as ‘soft indicators’. In turn, RHS-13 is in fact the most ‘severe’ one and is directly linked to the experience of a trauma, particularly in the context of humanitarian migration. Importantly, each second in the newly-arrived population reported an experience of trauma – if at all answered to sensitive questions – and the average RHS-13 score lies closely at the threshold of increased risks of posttraumatic stress disorder. Thus, actual medical treatment is likely to be needed so that for such cases the reform can unfold its positive effect by opening up treatment opportunities and options that would, otherwise, remain sealed.

The treatment of physical as well as mental illnesses requires time. In many cases the time span between the introduction of the eHC and the interviews with the surveyed population makes only up to two years. Hence, the success of therapy might not yet be visible, particularly since reliable evidence on most efficient and successful ways of treating psychological diseases of refugees is not yet available (Nickerson, Bryant et al. 2011). At the same time, the available capacity of relevant specialists (e.g., psychotherapists) is not even sufficient for the population in Germany, not to mention the recently arrived refugee cohorts (Albani, Blaser, Geyer, Schmutzer, & Brähler, 2010).

Altogether, the results evidence that allowing asylum-seekers faster and more direct access to the health system may indeed have positive impact on their psychological health outcomes – emotional distress in particular. Correspondingly, a comprehensive nationwide introduction of the eHC for asylum-seekers could benefit both humanitarian migrants and the German labor market and welfare state. Free access to health services, early detection of illnesses, handicaps and disabilities together with an effective treatment all may promote long-term integration into the German labor market and society. This underlines great potential from a nationwide introduction of the eHC for asylum-seekers and is well transferable to other countries since access to health services is restricted in most parts of the world not only for asylum-seekers and refugees but also for other groups of immigrants such as undocumented migrants.
8 Policy conclusions

Angela Merkel characterized refugee migration as the most demanding task of her chancellorship in summer 2015 – but was also optimistic that Germany will master this challenge. Almost four years after the surge in refugee migration to Germany and other European countries we can draw a first balance of what has happened in 2015 and what has been achieved regarding the integration of refugees into the economy and other areas of society in the main destination country of asylum-seekers in the EU. In the following, we briefly discuss the most important lessons from this unique experience.

First, the surge in refugee migration is closely associated with war, armed conflicts, persecution and other forms of human rights violations in origin countries. This is reflected not only in the self-reported motives for migration of the refugee population in Germany, but also in high shares of asylum-seekers who have received a protection status. The asylum applications of two-thirds of the refugee population in Germany have been meanwhile approved, while another one-fifth of the applications are still pending. The frequently voiced concern that the relatively easy access to Germany and other EU countries in 2015 has led to a massive influx of individuals without legitimate asylum claims is thus unfounded. In contrast, average approval rates of asylum applications are particularly high in the 2015 to 2018 period compared to previous historical refugee immigration episodes in Germany. This has the important implication that a majority of the refugee population will most likely stay in Germany, which, in turn, creates an unprecedented challenge for integration.

Second, war, armed conflicts and violence as well as the high risks and costs of migration have affected the selectivity of the refugee population in many dimensions, and, hence, their prerequisites for economic and social integration. Self-selection theories predict that the origin country risks have a positive impact on the skill-selection as well as on selection with respect to other abilities while the converse is true for migration risks. The available empirical evidence indicates that refugees are positively skill-selected relative to the population average in origin countries, but that a considerable education gap exists between the native population in Germany and the refugee population, particularly in the area of vocational training. This is a severe impediment to integration in a labor market which relies so heavily on professional certificates as the German one. However, an important qualification is that the refugee population possesses already a relatively long employment record and that the overwhelming share of those with working experience performed skilled or high-skilled tasks. Transferring these skills, which are often acquired on the job without formal certificates, into the German
labor market is one of the key challenges. Labor market integration might be, however, facilitated by the behavioral characteristics of the refugee population which are positively associated with economic success. Moreover, the selection of refugees in terms of values and attitudes show a strong support for democratic convictions which should facilitate integration both into the society and economy.

Third, the labor market integration of asylum-seekers who arrived in 2015 and the following years resembles largely experiences from previous refugee immigration episodes in Germany. About one-third of the refugee population has been employed by October 2018, i.e. about three years after the immigration surge in 2015. If this trend continues, between 40 and 45 percent of the refugee population will be in employment by the end of 2019, which is about one year faster compared to the record of other refugee arrivals since the beginning of the 1990s in Germany. Wage levels of full-time employed refugees are at about 55 percent well below median wage levels in Germany. Although considerable progress has been achieved with respect to the labor market integration of the recent refugee arrivals in Germany, it is still lagging well behind that of other immigration groups.

This is hardly surprising given that forced migrants are almost by definition ill-prepared for integration into labor markets of destination countries, lacking language skills and other human capital characteristics and face furthermore many legal and institutional barriers hindering integration. In this study, we have provided a selective, but in-depth analysis of three topics that are particularly relevant for the design of integration policies for humanitarian migrants not only from a German, but also from an international policy perspective.

8.1 Asylum policies

In view of various accompanied legal restrictions, the outcomes of asylum procedures have significant consequences not only for refugees’ staying prospects in the host society but also for their economic and social integration. Public and academic debate emphasizes further the negative consequences of protracted asylum procedures. It has been argued that refugees are kept in a kind of legal and social limbo, isolated and segregated from the native population during the processing of their asylum applications (Brekke, 2010; Hainmueller et al., 2016; Jackson & Bauder, 2014; Taylor & Rafferty-Brown, 2010). We analyzed the complex interaction between protracted asylum procedures, the legal status and regions of origin with regard to the initial decision of asylum-seekers to enter the labor market or to invest in language proficiency in Germany. Our findings show that a lengthy asylum procedure has a negative impact on labor market integration and delays entry into language courses.
Politicians should therefore strive for efficient and rapid asylum procedures in order to ensure legal certainty for asylum-seekers at an early stage. Faced with 1.6 million asylum applications, German asylum policies have prioritized the acceleration asylum procedures. The rationale behind these policies was, on the one hand, to increase chances to displace asylum-seekers whose claims have been declined, and, on the other hand, to facilitate integration of those whose applications have been approved by creating certainty on the legal status. Our findings do indeed support the view that reducing the length of asylum procedures and the approval of asylum applications increase employment chances considerably. Moreover, shorter asylum procedures and a decision on asylum applications promotes participation in integration programs irrespective of the outcome of the decision. Altogether, faster decisions and the approval of applications tend to facilitate integration.

The acceleration of asylum decisions was achieved in Germany beyond an increasing staff and higher efficiency of the decision-making authority, the BAMF, by the clustering of asylum-seekers with respect to their staying prospects. The overall length of asylum procedures has been reduced by these policies substantially but at the expense of non-prioritized groups who suffered from prolonged procedures. The non-prioritized groups suffered not only in terms of longer asylum procedures and higher legal uncertainty, but also from the exclusion from integration measures such as language courses. This exclusion may be associated with high economic and social costs, including the devaluation of human capital or being pushed into the informal economy. While the clustering of refugees was unavoidable to accelerate the overall decision-making process, the economic and social costs for those in longer-lasting asylum procedures could have been mitigated by the supply of language courses, labor market programs and other integration measures which would have increased the chances of successful and sustainable integration in Germany. In the case of a return to the country of origin, the qualifications acquired could be valuable for reintegration.

8.2 Dispersal policies

Germany, as most other destination countries, disperses newly arrived refugees administratively. They are, first, allocated across the 16 German states according to an annually updated quota based on tax revenue and population numbers (Königsteiner Schlüssel), and, second, within states following similar but state-specific criteria. As a consequence, the regional allocation of refugees differs largely from that of other migrants, which are concentrated either in prospering economic areas in Southern Germany, the Rhein-Main-region and other urban centers, or in the historical destinations of guestworker migration such as the Ruhr area. As
long as their asylum application has not been approved or was rejected, freedom of movement is restricted in case refugees could not make their own living. However, after approval, refugees were eligible to freely choose the place of residence before a wide-ranging reform of asylum policy became effective in August 2016. Political concerns about high rates of secondary migration mostly from economically weak to booming regions and the development of co-ethnic ghettos and parallel societies after obtaining freedom of movement emerged. Therefore, as part of a whole set of policy measures, the legislature implemented a residency obligation which compels approved refugees to reside in the state in which they claimed asylum for further three years. Six states – including Bavaria, Baden-Wuerttemberg and North Rhine-Westphalia as the economically prosperous, highly populated ones – go one step further and allocate the place of residence at the district or even municipality level.

Our empirical results reveal negative labor market effects of the more restrictive implementation at the small-scale district- or municipality level in terms of a slower transition into employment. Refugees residing in regions with unfavorable labor market conditions such as low population density, poor job-availability, low labor demand and high unemployment rates are particularly disadvantaged. This indicates that the residency obligation prevents them from moving into urban areas with more favorable labor market conditions after approval. Overall, we conclude that mobility restrictions seem to have a detrimental impact on labor market integration.

8.3 Health policy

The relevance of health status for individual educational achievements (Baird, Hicks, Kremer, & Miguel, 2016) economic integration (e.g., Chatterji et al., 2011) as well as social inclusion (e.g., Steptoe et al., 2015) has been shown many times in the empirical literature. From the societal point of view, adverse health status of population (groups) may cause economic and fiscal damages due to fewer hours worked or overall work absenteeism (Hanna & Oliva, 2015). In this sense, restricted or even no access to the healthcare system for highly disadvantaged population groups such as humanitarian migrants – not uncommon in developed destination countries – can be detrimental for the economy and the society as a whole. In Germany, only several federal states and municipalities opened up an immediate access to the healthcare system for asylum-seekers already before their asylum request is approved. In other localities, asylum-seekers who require a doctor visit have to claim it either by the local authority for foreigners or the responsible social assistance office in Germany. Such constellations can not
only result in the delayed treatment but are likely to surge serious health impairments and illnesses that likely remain unrecognized.

In line with that, our results evidence that the introduction of the reforms allowing asylum-seekers’ faster and more direct access to the health system indeed had positive impact on their health outcomes such as emotional distress. However, we found no impact on physical health indicators, which may be caused by the relatively young age of the refugee population and their correspondingly favorable physical health conditions. Nevertheless, a comprehensive nationwide immediate access to the healthcare system for asylum-seekers could benefit both humanitarian migrants and the German labor market and welfare state. Free access to health services, early detection of illnesses, handicaps and disabilities together with an effective treatment all may promote long-term integration into the German labor market and society.

Critics of such reforms must be confronted with the fact that empirical results from very similar research contexts are available and – contrary to what might be assumed – prove that in fact such a reform reduces treatment costs in the medium or long run (Bozorgmehr & Razum, 2015). Another criticism is that full access to the German healthcare system could increase the attractiveness of Germany as a destination country relative to other contemplable destination countries and would act as an additional pull factor for humanitarian migration. However, a significant impact on the migration decision to leave the country of origin is questionable: an extremely risky journey would have to be withstood before asylum-seekers could benefit from the then unrestricted healthcare system in Germany or elsewhere in western countries.

Overall, we can conclude that considerable progress has been achieved in the integration of refugees who have arrived in the course of the 2015 immigration surge in Germany and the subsequent years. The acceleration of asylum procedures, the provision of language and other integration programs at an early stage after arrival and access to the health system may facilitate integration, while administrative dispersal policies and mobility restrictions tend to reduce integration chances particularly for those captured in regions with relatively unfavorable labor market conditions. The final jury whether Germany ‘has made it’ as was predicted by chancellor Merkel in the summer of 2015 stands still out, given that two-thirds of the refugee population in working age is not yet in employment. Nevertheless, the labor market integration of the German refugee population seems to proceed slightly faster in comparison to past refugee immigration episodes, which is in our view a remarkable result given the large scale of the recent influx.
Appendix A

Political Terror Scale

Level 1: Countries under a secure rule of law, people are not imprisoned for their views, and torture is rare or exceptional. Political murders are extremely rare. Level 2: There is a limited amount of imprisonment for nonviolent political activity. However, few persons are affected, torture and beatings are exceptional. Political murder is rare. Level 3: There is extensive political imprisonment, or a recent history of such imprisonment. Execution or other political murders and brutality may be common. Unlimited detention, with or without a trial, for political views is accepted. Level 4: Civil and political rights violations have expanded to large numbers of the population. Murders, disappearances, and torture are a common part of life. In spite of its generality, on this level terror affects those who interest themselves in politics or ideas. Level 5: Terror has expanded to the whole population. The leaders of these societies place no limits on the means or thoroughness with which they pursue personal or ideological goals.

Freedom House Political Rights Index

Rating 1: Countries enjoy a wide range of political rights, including free and fair elections. Candidates who are elected actually rule, political parties are competitive, the opposition plays an important role and enjoys real power, and the interests of minority groups are well represented in politics and government. Rating 2: Countries have slightly weaker political rights than those with a rating of 1 because of such factors as political corruption, limits on the functioning of political parties and opposition groups, and flawed electoral processes. Rating 3, 4, 5: Countries either moderately protect almost all political rights or strongly protect some political rights while neglecting others. The same factors that undermine freedom in countries with a rating of 2 may also weaken political rights in those with a rating of 3, 4, or 5, but to a greater extent at each successive rating. Rating 6: Countries have very restricted political rights. They are ruled by authoritarian regimes, often with leaders or parties that originally took power by force and have been in office for decades. They may hold tightly controlled elections and grant a few political rights, such as some representation or autonomy for minority groups. Rating 7: Countries have few or no political rights because of severe government oppression, sometimes in combination with civil war. While some are draconian police states, others may lack an authoritative and functioning central government and suffer from extreme violence or rule by regional warlords.
**Freedom House Civil Liberties Index**

*Rating 1:* Countries enjoy a wide range of civil liberties, including freedoms of expression, assembly, association, education, and religion. They have an established and generally fair legal system that ensures the rule of law (including an independent judiciary), allow free economic activity, and tend to strive for equality of opportunity for everyone, including women and minority groups. *Rating 2:* Countries have slightly weaker civil liberties than those with a rating of 1 because of such factors as limits on media independence, restrictions on trade union activities, and discrimination against minority groups and women. *Rating 3,4,5:* Countries either moderately protect almost all civil liberties or strongly protect some civil liberties while neglecting others. The same factors that undermine freedom in countries with a rating of 2 may also weaken civil liberties in those with a rating of 3, 4, or 5, but to a greater extent at each successive rating. *Rating 6:* Countries have very restricted civil liberties. They strongly limit the rights of expression and association and frequently hold political prisoners. They may allow a few civil liberties, such as some religious and social freedoms, some highly restricted private business activity, and some open and free private discussion. Rating 7: Countries have few or no civil liberties. Their governments or powerful nonstate actors allow virtually no freedom of expression or association, do not protect the rights of detainees and prisoners, and often control most economic activity.

**Uppsala Conflict Data Program**

The data on fatalities are taken from the UCDP (Pettersson & Eck, 2018) and refer to battle-related deaths and fatalities arising from one-sided armed conflicts.
References


